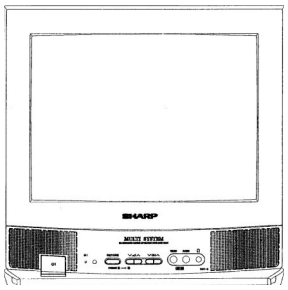
SERVICE MANUAL

COLOUR TELEVISION

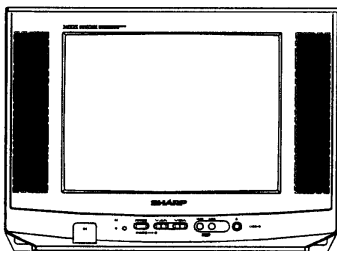
MODELS 14D1-S/G/W, 14D2-S/G

# SHARP SERVICE MANUAL

SX2T914D-1S//



14D1-S/G/W



14D2-S/G

## COLOUR TELEVISION

## *Chassis No. GA-1AM*

# MODELS 14D1-S/G/W 14D2-S/G

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

## FEATURES

- Multi 18 systems
- Full Auto Channel Preset and Auto Channel Skip
- 100-CH Program Memory
- CATV(Hyper Band) Ready
  <Used Frequency Synthesizer Tuner>
- AVL(Sound Keeper) Function
- Black Stretch Circuit
- On Timer/Sleep Timer/Reminder Timer
- Blue Back Noise Mute
- Front Headphone Terminal
- Front AV-In & Rear AV-In/Out Terminals (Front Priority)
- Colour Comb Filter(NTSC only)
- High Contrast Picture
- Hotel Mode
- Arabic/Chinese/English/French/Malay/Russian 6 Languages OSD
- White Temperature Adjustment

## CONTENTS

Page

- SPECIFICATIONS ..... 2
- IMPORTANT SERVICE NOTES ..... 2
- ADJUSTMENT PRECAUTIONS ..... 3
- MEMORY MAP ..... 11
- GA1 HOTEL MODE APPLICATION ..... 15
- TROUBLE SHOOTING TABLE ..... 15
- WAVEFORMS ..... 18
- SOLID STATE DEVICE BASE DIAGRAM ..... 20
- CHASSIS LAYOUT ..... 21
- BLOCK DIAGRAM ..... 23
- DESCRIPTION OF SCHEMATIC DIAGRAM .. 28
- SCHEMATIC DIAGRAM
  - CRT UNIT ..... 29
  - HEAD PHONE UNIT ..... 29
  - MAIN UNIT ..... 30
- PRINTED WIRING BOARD ASSEMBLIES ..... 34
- REPLACEMENT PARTS LIST
  - ELECTRICAL PARTS
    - MAIN UNIT ..... 39
    - CRT UNIT ..... 42
    - HEAD PHONE UNIT ..... 43
  - SUPPLIED ACCESSORIES ..... 43
  - PACKING PARTS ..... 43
  - CABINET PARTS ..... 44
- PACKING OF THE SET ..... 45

## WARNING

**The chassis in this receiver is partially hot. Use an isolation transformer between the line cord plug and power receptacle, when servicing this chassis. To prevent electric shock, do not remove cover. No user – serviceable parts inside. Refer servicing to qualified service personnel.**

SHARP CORPORATION

# SPECIFICATIONS

Convergence ..... Self Convergence System
Focus ..... Quadra-Potential Electrostatic

Sweep Deflection ..... Magnetic
Intermediate Frequencies
  Picture IF Carrier ..... 38.9MHz
  Sound IF Carrier Frequency
    6.5MHz ..... 32.4MHz
    6.0MHz ..... 32.9MHz
    5.5MHz ..... 33.4MHz
  Colour Sub-Carrier Frequency ..... 34.47MHz

Power Input ..... 110 ~ 240V AC 50/60 Hz
Power Consumption
  14D1-S/G/W ..... 58W
  14D2-S/G ..... 62W

Audio Power Output Rating
  14D1-S/G/W ..... 3.0W(at Max.)
  14D2-S/G ..... 5.0W(at Max.)

Speaker
  Size
    14D1-S/G/W ..... 5 x 9 cm Elliptic (1pc)
    14D2-S/G ..... 5 x 9 cm Elliptic (2 pcs)
  Voice Coil Impedance ..... 16 ohms at 400 Hz

Aerial Input Impedance
  VHF/UHF ..... 75 ohms Unbalanced
Receiving System ..... CCIR SECAM/PAL B, G,D,K,I

Tuner Ranges
  VHF-Channels ..... E2(48.25MHz) thru E12(224.25MHz)
    C1(49.75MHz) thru C12(216.25 MHz)
    S1(105.25MHz) thru S36(423.25HMz)
  UHF-Channels ..... E21(471.25MHz) thru E69(855.25MHz)
    C13(471.25MHz) thru C57(863.25MHz)
    S37(431.25MHz) thru S41(463.25MHz)

Dimensions
  14D1-S/G/W ..... Width: 357.0mm
    Height: 364.0mm
    Depth: 370.5mm
    Weight(approx): 9.5 kg
  14D2-S/G ..... Width: 446.0mm
    Height: 333.0mm
    Depth: 362.0mm
    Weight(approx): 9.2 kg

Cabinet material ..... All Plastics

***Specifications are subject to change without prior notice.***



# IMPORTANT SERVICE NOTES

**Maintenance and repairing of this receiver should be done by qualified service personnel only.**

## SERVICE OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

**When servicing the high voltage system, remove static charge from it by Connecting a 10K ohm Resistor in series with an insulated wire(such as a test probe) between picture tube dag and 2nd anode lead. (AC line cord should be disconnected from AC outlet.)**

1. **Picture tube in this receiver employs integral implosion protection.**
2. **Replace with tube of the same type number for continued safety.**
3. **Do not lift picture tube by the neck.**
4. **Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage completely.**

## X-RAY

**This receiver is designed so that any X-Ray radiation is kept to an absolute Minimum. Since certain malfunctions or servicing may produce potentially hazardous radiation with prolonged exposure at close range, the following precautions should be observed:**

1. **When repairing the circuit, be sure not to increase the high voltage to more than 23.7kV(at beam 0 μA) for the set.**
2. **To keep the set in a normal opeartion , be sure to make it function on 22.5kV±1.5kV(at beam 800 μA) in the case of the set. The set has been factory - Adjusted to the above-mentioned high voltage.**
   *** If there is a possibility that the high voltage fluctuates as a result of the repairing, never forget to check for such high voltage after the work.**
3. **Do not substitute a picture tube with unauthorizerd types and/or brands which may cause excess X-ray radiation.**

## BEFORE RETURNING THE RECEIVER

**Before returning the receiver to the user, perform the following safety Checks.**

1. **Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.**
2. **Inspect all protective devices such as non-metallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor- capacity networks, mechanical insulators etc.**

# ADJUSTMENT PRECAUTIONS

This model's setting are adjusted in two different ways: through the I²C bus control and in the conventional analog manner. The adjustments via the I²C bus control include preset-only items and variable data.
CAUTION: Make sure TV Set is in "Normal Condition" before switch to Service Mode for adjustment.

## 1. Setting the service mode by the microprocessor.

①. Short JA 137 & JA 138 for 1 second and release to switch to the service mode position, and the microprocessor is in input mode. (Adjustment through the I2C bus control). (Use JWS Key to set as well).

②. Press the CH DOWN / UP key on the remote controller to get ready to select the mode one by one.

③. Press the CH DOWN / UP key on the remote controller to select the modes reversibly one by one.

④. Using the VOLUME UP/ DOWN key on the remote controller, the data can be modified.

⑤. Short JA 137 & JA 138 for 1 second and release to switch to the normal mode (OFF) position, and the microprocessor is in out of the service mode.

## 2. Factory Presetting.

①.Short JA 137 & JA 138 then turn "ON" the main power and release to switch to the Service Mode position.Initial values are automatically preset, only when a new EEPROM is used (Judge with the first 4 bytes ).

②. The initial data are preset as listed in page 8, 9, & 10.

③. Make sure the data need modify or not (Initial data).

**Note: Once the chassis has been assembly together and ready to be POWER ON for the FIRST TIME, make sure to short JA137 & JA138 to switch to the service mode position first and then turn on the main power switch (See 2-(1) above).**

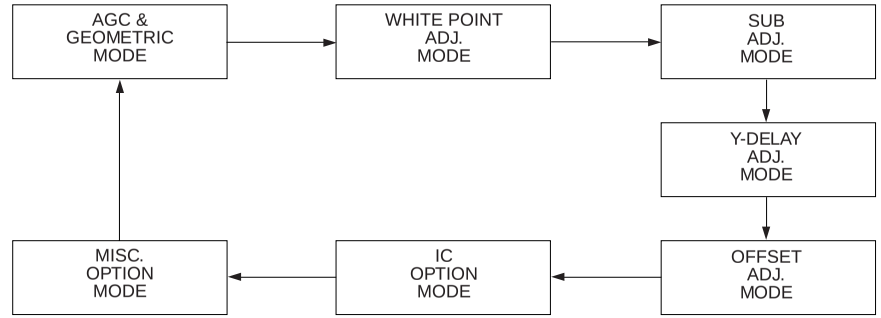
**Precaution: If haven't done this initiation, it may possibly generate excessive Beam current.**

## 3. For reference please check with memory map (GA-1AM Series type RH-IX3368CE Attachment)



## ■ SERVICE MODE

(1) In the Service Mode, Key is used to select the mode in the following order.




FORWARD : CH DOWN KEY
REVERSE : CH UP KEY

**AGC & GEOMETRIC MODE**

AGC TAKE OVER POINT (AGC)
↓
VERTICAL SLOPE (V-LIN)
↓
VERTICAL AMP (V-AMP)
↓
VERTICAL SHIFT (V-CENT)
↓
HORIZONTAL SHIFT (H-CENT)
↓
EAST-WEST WIDTH (H-SIZE)
↓
HORIZONTAL PARALLELOGRAM (EW//)
↓
EAST-WEST PARABOLA/WIDTH (PARA)
↓
EAST-WEST UPPER COR. PB (LOR(U))
↓
EAST-WEST LOWER COR. PB (COR(L))
↓
EAST-WEST TRAPEZIUM (TRAPE)
↓
HORIZONTAL BOW (HB)
↓
S-CORRECTION (S-COR)

**WHITE POINT ADJ. MODE**

W.P RED STD. W.T. (DRI-RS)
↓
W.P. GREEN STD. W.T.(DRI-GS)
↓
W.P.BLUE STD. W.P. (DRI-BS)
↓
W.P. RED WARM W.P.(DRI-RC)
↓
W.P. GREEN WARM W.P.(DRI-GC)
↓
W.P. BLUE WARM W.P.(DRI-BC)
↓
W.P. RED COOL W.P.(DRI-RW)
↓
W.P. GREEN COOL W.P.(DRI-GW)
↓
W.P. BLUE COOL W.P. (DRI-BW)

**SUB ADJ. MODE**

MAX VOLUME (SUB-VOL)
↓
SUB CONTRAST (SUB-CON)
↓
SUB COLOUR (SUB-COL)
↓
SUB BRIGHTNESS (SUB-BRI)
↓
SUB TINT (SUB-TINT)
↓
SUB SHARPNESS (SUB-SHP)
↓
MAX HOTEL VOLUME (HTL-VOL)
↓
HOTEL PROGRAM NO(HTL-PRG)
↓
OSD GRB REFERENCE (RGB)
↓
BLACK LEVEL OFFSET R(CUT-R)
↓
BLACK LEVEL OFFSET B(CUT-B)
↓
CATHODE DRIVE LEVEL(CDL)

FORWARD : CH DOWN KEY
REVERSE : CH UP KEY
* ( ) means OSD display.

* Direct Key-in for Service Item in Service Mode

| RC COMMAND | SERVICE-ITEM |
|---|---|
| FUNCTION | AGC |
| CONTRAST DOWN | V-LIN |
| COLOUR DOWN | V-AMP |
| BRIGHTNESS DOWN | V-CENT |
| TINT DOWN | H-CENT |
| SHARPNESS DOWN | EW / / |
| SYSTEM | HB |
| BLUEBACK | S-COR |
| TIMER | SUB-VOL |
| CONTRAST UP | SUB-CON |
| COLOUR UP | SUB-COL |
| BRIGHTNESS UP | SUB-BRI |
| TINT UP | SUB TINT |
| SHARPNESS UP | SUB-SHP |

AFTER SHORT JA 137 & JA 138 ,AND TURN ON THE MAIN POWER SWITCH,READ DATA FROM EEPROM ADDRESS 00H ~ 03H,AND COMPARE TO THE LIST BELOW, IF DIFFERENT, INITIALIZE THE EEPROM.

| Address | : | Data | Address | : | Data |
|---|---|---|---|---|---|
| 00H | : | 55H | 02H | : | 43H |
| 01H | : | 4FH | 03H | : | A1H |

| EEPROM ITEMS | OSD | DATA LENGTH | INITIAL DATA | FIX/ADJ | REMARK |
|---|---|---|---|---|---|
| AGC TAKE OVER POINT | AGC | 0~63 | 14 | ADJ | |
| VERTICAL SLOPE | V-LIN | 0~63 | 32 | ADJ | |
| VERTICAL AMPLITUDE | V-AMP | 0~63 | 32 | ADJ | |
| VERTICAL SHIFT | V-CENT | 0~63 | 32 | ADJ | |
| HORIZONTAL SHIFT | H-CENT | 0~63 | 32 | ADJ | |
| EAST-WEST WIDTH | H-SIZE | 0~63 | 32 | *FIX | |
| HORIZONTAL PARALLELOGRAM | EW// | 0~63 | 32 | *FIX | |
| EAST-WEST PARABOLA/WIDTH | PARA | 0~63 | 32 | *FIX | |
| EAST-WEST UPPER CORNER PARABOLA | COR (U) | 0~63 | 32 | *FIX | |
| EAST-WEST LOWER CORNER PARABOLA | COR (L) | 0~63 | 32 | *FIX | |
| EAST-WEST TRAPEZIUM | TRAPE | 0~63 | 32 | *FIX | |
| HORIZONTAL BOW | HB | 0~63 | 32 | *FIX | |
| S-CORRECTION | S-COR | 0~63 | 0 (17) | *FIX | |
| WHITE POINT RED STD WHITE TEMP | DRI-RS | 0~63 | 32 | *FIX | |
| WHITE POINT GREEN STD WHITE TEMP | DRI-GS | 0~63 | 32 | ADJ | |
| WHITE POINT BLUE STD WHITE TEMP | DRI-BS | 0~63 | 32 | ADJ | |
| WHITE POINT RED COOL WHITE TEMP | DRI-RC | 0~63 | 25 | ADJ | *3 |
| WHITE POINT GREEN COOL WHITE TEMP | DRI-GC | 0~63 | 32 | ADJ | (DRI-GS)-7 DATA*3 |
| WHITE POINT BLUE COOL WHITE TEMP | DRI-BC | 0~63 | 32 | ADJ | SAME AS (DRI-BS) DATA |
| WHITE POINT RED WARM WHITE TEMP | DRI-RW | 0~63 | 32 | *FIX | |
| WHITE POINT GREEN WARM WHITE TEMP | DRI-GW | 0~63 | 32 | ADJ | (DRI-GS)-7 DATA |
| WHITE POINT BLUE WARM WHITE TEMP | DRI-BW | 0~63 | 32 | ADJ | (DRI-BS)-7 DATA |
| MAX VOLUME | SUB-VOL | 0~63 | 63 | *FIX | |
| SUB CONTRAST | SUB-CON | 0~63 | 63 (52) | *FIX | |
| SUB COLOUR | SUB-COL | 0~63 | 32 | ADJ | |
| SUB BRIGHTNESS | SUB-BRI | 0~63 | 32 | ADJ | |
| SUB TINT | SUB-TINT | 0~63 | 32 | ADJ | |
| SUB SHARPNESS | SUB-SHP | 0~63 | 32 (20) | *FIX | |
| MAX HOTEL VOLUME | HTL-VOL | 0~63 | 32 | *FIX | |
| HOTEL PROGRAM NUMBER | HTL-PRG | 0~99 OR>99FOR NONE | 255 | *FIX | |
| OSD GRB REFERENCE | RGB | 0~15 | 15 (6) | *FIX | |
| BLACK LEVEL OFF-SET R | CUT-R | 0~63 | 32 | ADJ | |
| BLACK LEVEL OFF-SET G | CUT-G | 0~63 | 32 | ADJ | |
| CATHODE DRIVE LEVEL | CDL | 0~15 | 0 (5) | *FIX | |
| Y-DELAY TIME FOR PAL(TV) [YD] | DL-PT | 0~15 | 12 | *FIX | |
| Y-DELAY TIME FOR SECAM(TV) [YD] | DL-ST | 0~15 | 15 | *FIX | |
| Y-DELAY TIME FOR N358 (TV) [YD] | DL-3T | 0~15 | 12 | *FIX | |
| Y-DELAY TIME FOR N443 (TV) [YD] | DL-4T | 0~15 | 12 | *FIX | |
| Y-DELAY TIME FOR B/W (TV) [YD] | DL-TV | 0~15 | 12 | *FIX | |
| Y-DELAY TIME FOR PAL (AV) [YD] | DL-PA | 0~15 | 12 | *FIX | |
| Y-DELAY TIME FOR SECAM (AV) [YD] | DL-SA | 0~15 | 15 | *FIX | |
| Y-DELAY TIME FOR N358 (AV) [YD] | DL-3A | 0~15 | 12 | *FIX | |
| Y-DELAY TIME FOR N443 (AV) [YD] | DL-4A | 0~15 | 12 | *FIX | |
| Y-DELAY TIME FOR B/W (AV) [YD] | DL-AV | 0~15 | 12 | *FIX | |
| COLOUR OFFSET (PAL) | COL-OP | 0~15 | 8 | ADJ | *6 |
| COLOUR OFFSET (SECAM) | COL-OS | 0~15 | 8 | ADJ | *6 |
| COLOUR OFFSET (NTSC358) | COL-O3 | 0~15 | 4 | ADJ | *6 |
| COLOUR OFFSET (NTSC443) | COL-O4 | 0~15 | 4 | ADJ | *6 |
| SHARPNESS OFFSET (PAL) | SHP-OP | 0~15 | 8 | *FIX | |
| SHARPNESS OFFSET (SECAM) | SHP-OS | 0~15 | 4 | *FIX | |
| SHARPNESS OFFSET (NTSC358) | SHP-O3 | 0~15 | 12 (8) | *FIX | |



| EEPROM ITEMS | OSD | DATA LENGTH | INITIAL DATA | FIX/ADJ | REMARK |
|---|---|---|---|---|---|
| SHARPNESS OFFSET (NTSC443) | SHP-O4 | 0~15 | 8 | *FIX | |
| VERTICAL SCAN DISABLE | VSD | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| BLACK STRETCH | BKS | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| AUTOMATIC VOLUME LEVELING | AVL | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| FAST FILTER IF-PLL | FFI | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| ENABLE VERTICAL GUARD (RGB BLANKING) | EVG | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| EHT TRACKING MODE (HCO) | EHT | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| OVERSCAN SWITCH OFF | OSO | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| AUTO COLOUR LIMIT | ACL | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| FORCED COLOUR LIMIT | FCO | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| SOUND SYSTEM M | S-M | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| SOUND SYSTEM DK | S-DK | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| SOUND SYSTEM I | S-I | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| SOUND SYSTEM BG | S-BG | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| PLAYBACK SECAM | P-SECAM | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| FE (RF) NTSC 3.58 | F-N358 | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| FE (RF) NTSC 4.43 | F-N443 | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| FE (RF) SECAM | F-SECAM | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| VIDEO MUTE AT IDENT LOSS | VMI | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| VIDEO MUTE AT PROGRAM/SOURCE CHANGE | VMC | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| HOTEL MODE | HTL | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| REDUCED FM DEMODULATOR GAIN FOR BTSC SIGNAL | BTSC | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| NUMBER OF EXTERNAL AV SOURCE | AV | 0 FOR1 AV/1 FOR 2AV | 1 (0) | *FIX | |
| FM WINDOW SELECTION | FMWS | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| SOUND MUTE BIT 0 | SM0 | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| SOUND MUTE BIT 1 | SM1 | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| THAI LANGUAGE | THA | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| ARABIC LANGUAGE | ARA | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| MALAY LANGUAGE | MAL | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| CHINESE LANGUAGE | CHI | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| FRENCH LANGUAGE | FRE | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| RUSSIAN LANGUAGE | RUS | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| FORCED V-SYNC SLICING LEVEL | FSL | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| SYNC OF OSD | HP2 | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| TUNER SELECTION (0:SHARP/ALPS;1:MURATA) | CPT | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| BILINGUAL | BIL | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| IF AGC SPEED BIT 0 | AGC0 | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| IF AGC SPEED BIT 1 | AGC1 | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| PHI-1 TIME CONSTANT (RF) | FOA-FE | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| PHI-1 TIME CONSTANT (RF) | FOB-FE | 0(DISABLE)/1(ENABLE) | 0 | *FIX | |
| PHI-1 TIME CONSTANT (OFF AIR) | FOA-AV | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| PHI-1 TIME CONSTANT (OFF AIR) | FOB-AV | 0(DISABLE)/1(ENABLE) | 1 | *FIX | |
| LED BLINK SPEED | LED_F | 0(DISABLE)/1(ENABLE) | 0 (1) | *FIX | |
| VOLUME CONTROL PWM TABLE | MSA | 0(DISABLE)/1(ENABLE) | 0 (1) | *FIX | |
| OUTPUT VERTICAL GUARD | NDF | 0(DISABLE)/1(ENABLE) | 0 (1) | *FIX | |

NOTE :

1) *FIX: PLEASE DO NOT CHANGE FIXED DATA WITHOUT SPECIFIC INSTRUCTION.
   Please set the EEPROM initial data according to the value in parenthesis ( ) before adjustment.
2) *3: 12300°K DEGREE COLOUR TEMP MINUS 7, DRI-RC=25, DRI-GC=(DRI-GS)-7
   18000°K DEGREE COLOUR TEMP MINUS 5, DRI-RC=27, DRI-GC=(DRI-GS)-5
3) *6: ADJUST COLOUR OFFSET AFTER ADJUST SUB-COLOUR.
   COLOUR OFFSET (PAL) COL-OP : 8 -----> 14
   COLOUR OFFSET (SECAM) COL-OS : 8 -----> 14
   COLOUR OFFSET (NTSC358) COL-O3 : 4 -----> 10
   COLOUR OFFSET (NTSC443) COL-O4 : 4 -----> 10

# INITIAL SETTING

(1). In service mode, After execute select POS 1, store the following tuning data in E²PROM.
Note: All sound system of following channels will be set to B/G or I after pressing INITIAL KEY 2, 3 or 4.

| MCL1 | | |
|---|---|---|
| CH-NO | Fv (MHz) | SOUND SYS |
| 0 | 41.10 | |
| 1 | 48.25 | B/G |
| 2 | 62.25 | B/G |
| 3 | 77.25 | D/K |
| 4 | 175.25 | B/G |
| 5 | 182.25 | B/G |
| 6 | 183.25 | D/K |
| 7 | 191.25 | D/K |
| 8 | 196.25 | B/G |
| 9 | 199.25 | M |
| 10 | 210.25 | B/G |
| 11 | 224.25 | B/G |
| 12 | 471.25 | B/G |
| 13 | 487.25 | I |
| 14 | 503.25 | B/G |
| 15 | 575.25 | B/G |
| 16 | 583.25 | B/G |
| 17 | 599.25 | B/G |
| 18 | 621.25 | M |
| 19 | 639.25 | D/K |
| 20 | 703.25 | B/G |
| 21 | 735.25 | I |
| 22 | 767.25 | B/G |
| 23 | 815.25 | B/G |
| 24 | 855.25 | I |
| 25 | 855.25 | B/G |
| 26 | 55.25 | M |
| 27 | 83.25 | M |
| 28 | 183.25 | M |
| 29 | 193.25 | M |
| 30 | 217.25 | M |
| 31 | 471.25 | M |
| 32 | 477.25 | M |
| 33 | 693.25 | M |
| 34 | 41.10 | |
| 35 | 112.25 | B/G |
| 36 | 168.25 | B/G |
| 37 | 41.10 | |
| 38 | 294.25 | B/G |
| 39 | 463.25 | B/G |
| 40 | 41.10 | |
| 41 | 647.25 | B/G |
| 42 | 663.25 | B/G |
| 43 | 679.25 | B/G |
| 44 | 174.95 | B/G |
| 45 | 175.55 | B/G |
| 46 | 41.10 | |
| ↓ | | |
| 99 | 41.10 | |



# SHIPPING SETTING & CHECKING

(1) The following default data has been factory-set for the E²PROM.

| ITEMS | DATA SETTING |
|---|---|
| LAST PROGRAM/CHANNEL | 1 |
| FLASHBACK PROGARM/CH | 1 |
| DIGIT | 1 |
| C-SYSTEM | AUTO |
| S-SYSTEM | *1 |
| SKIP | OFF |
| AFC | ON |
| VOLUME | 1 |
| CONTRAST | 60 (MAX) |
| COLOUR | 0 (CENTER) |
| BRIGHTNESS | 0 (CENTER) |
| TINT | 0 (CENTER) |
| SHARPNESS | 0 (CENTER) |
| WHITE TEMP | STANDARD |
| REMINDER TIMER | In-active, "--:--" |
| ON TIMER | In-active, "--:--" |
| OFF TIMER | In-active, "--:--" |
| LAST POWER | POWER-ON |
| LANGUAGE | *1 |
| BLUE BACK MUTE | ON |
| HOTEL MODE | OFF |
| 0 CHANNEL SKIP | ON |
| LAST TV/AV | TV |

*1: Please refer defaults for LANGUAGE and SOUND SYSTEM per MODEL as follows,

| INITIAL | LANGAUGE | SOUND SYSTEM |
|---|---|---|
| 2 | CHINESE | I |
| 3 | ENGLISH | B/G |
| 4 | ARABIC | B/G |

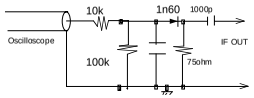
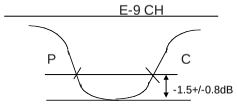
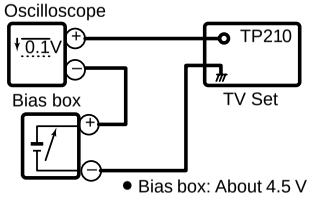
**FACTORY SETTINGS BY MODELS (Reference: Geomagnetism Adjustment)**

| MODEL | Geomagnetism (H,V) nT | Background | Lang. | S-SYS | Lang. QTY |
|---|---|---|---|---|---|
| HONG KONG) | "30,000" "20,000" | 12300K | CHINESE | I | 6 |
| (SINGAPORE) | "-10,000" "40,000" | 12300K | ENGLISH | B/G | 6 |
| (MID EAST) | "30,000" "20,000" | 12300K | ARABIC | B/G | 6 |
| (AFRICA) | "-10,000" "40,000" | 12300K | ENGLISH | B/G | 6 |

LANGUAGE QTY: ENGLISH/CHINESE/FRENCH/ARABIC/MALAY/RUSSIAN

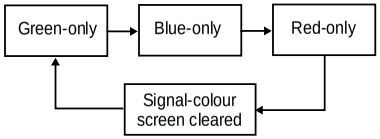
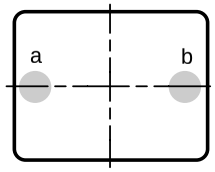
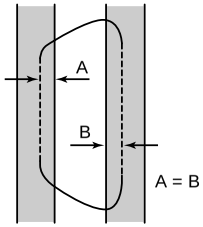
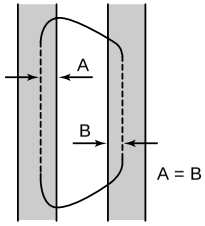
**ADJUSTMENT PRECAUTION:**
Make sure TV Set is in "Normal Condition" before switch to service mode for adjustment.

# PIF ADJUSTMENT

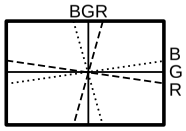
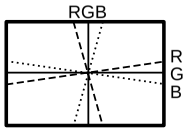
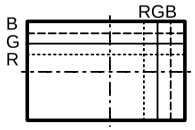
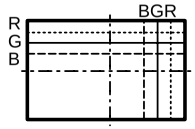
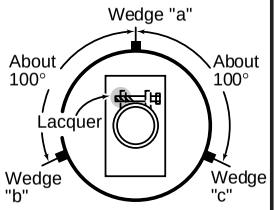
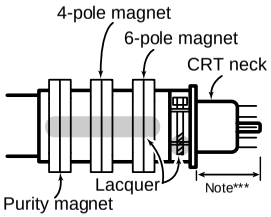
| No. | Adjusting point | Adjusting procedure/conditions | Waveform and others |
|---|---|---|---|
| 1 | **Tuner IFT ( PRESET )** | 1. Get the tuner ready to receive the CH. E - 9 signal,but with no signal input. Adjust the PLL data.<br>2. Connect the sweep generator's output cable to the tuner antenna. ( RF SWEEP )<br>3. Adjust the sweep generator's to 80dBuV.<br>4. Connect the response lead ( use LOW IMPEDANCE probe with wave detector ; see Fig.1 ) to the tuner's IF output terminal. ( This terminal must have the probe alone connected ).<br>5. Set the RF AGC to 0 - 6 V with no saturation with the waveform.<br>6. Adjust the tuner IF coil to obtain the waveform as shown in Fig. 2.<br><br>Note: Be sure to keep the tuner cover in position during this adjustment. |  <br>Fig.1<br>  <br>Fig.2 |
| 2 | **RF-AGC TAKE OVER POINT ADJUSTMENT (I²C BUS CONTROL)** | 1. Receive "PAL COLOUR BAR" signal.<br>● Signal Strength: 57 ± 1 dBμV (75 ohm open)<br>2. Connect the oscilloscope to TP201(Tuner's AGC Terminal) as shown in Fig. 3.<br>  <br>Fig. 3<br>3. Call "AGC" mode in service mode. Adjust the "AGC" bus data to obtain the Tuner output pin drop 0.1V below maximum voltage.<br>4. Change the antenna input signal to 63~67dBμV, and make sure there is no noise.<br>5. Turn up the input signal to 90~95 dBμV to be sure that there is no cross modulation beat. | **Note: For the 50 ohm signal strength gauge, when not using 50/75 impedance adapter, signal strength is 52±1dBμV(75 ohm open), instead of 57±1dBμV (75 ohm open).**<br>**Precaution: The loss of using impedance adapter** |



# PURITY ADJUSTMENT

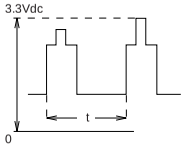
| No. | Adjusting point | Adjusting procedure/conditions | Waveform and others |
|---|---|---|---|
| 1 | **PURITY ADJ.** | 1. Receive the GREEN-ONLY signal. Adjust the beam current to about 500 μA.<br>2. Degauss the CRT enough with the degausing coil.<br>**Note: Follow the Job Instruction Sheet to adjust the magnetic field.**<br>3. Maintain the purity magnet at the zero magnetic field and keep the static convergence roughly adjusted.<br>4. Observe the points a, b as shown in Fig. 4-1 through the microscope. Adjust the landing to the rank A requirements.<br>5. Orient the raster rotation to 0 eastward.<br>6. Tighten up the deflection coil screws.<br>● Tightening torque: 108 ± 20 N (11 ± 2 kgf)<br>7. Make sure the CRT corners landing meet the A rank requirements. If not, stick the magnet sheet to correct it.<br>**Note: This adjustment must be done after warming up the unit for 30 minutes or longer with a beam current over 500 μA.**<br><br>* For the following colours press R/C RGB key to change.<br>  |  <br>Fig. 4-1<br>  <br>Fig. 4-2<br>Rank "A"<br>(on the right of the CRT)<br>  <br>Fig. 4-3<br>Rank "A"<br>(on the left of the CRT)<br><br>* Press R/C RGB key for 1 second in NORMAL MODE, the colour will change to RGB mono colour mode.<br><br>The TEXT Key "R. G. Cy" Key can be directly use to change to other colours screen. |

# CONVERGENCE ADJUSTMENT

| No. | Adjusting point | Adjusting procedure/conditions | Waveform and others |
|---|---|---|---|
| 1 | **CONVERGENC ADJ. ( To be done after the purity adjustment.** | 1. Receive the "Crosshatch Pattern" signal.<br>2. Using the remote controller, call NORMAL mode.<br><br>**STATIC CONVERGENCE**<br>1. Turn the 4-pole magnet to a proper opening angle in order to superpose the blue and red colours.<br>2. Turn the 6-pole magnet to a proper opening angle in order to superpose the green colour over the blue and red colours.<br><br>**DYNAMIC CONVERGENCE**<br>1. Adjust the convergence on the fringes of the screen in the following steps.<br>a) Fig. 5-1: Drive the wedge at point "a" and swing the deflection coil upward.<br>b) Fig. 5-2: Drive the wedge at points "b" and "c" and swing the deflection coil downward.<br>c) Fig. 5-3: Drive the "c" wedge deeper and swing the deflection coil rightward.<br>d) Fig. 5-4: Drive the "b" wedge deeper and swing the deflection coil leftward.<br>2. Fix all the wedges on the CRT and apply glass tape over them.<br>3. Apply lacquer to the deflection yoke lock screw, magnet unit (purity, 4-pole, 6-pole magnets) and magnet unit lock screw.<br><br>Finally received the Red-only and Blue-only signals to make sure there is no other colours on the screen.<br><br>Note***<br>SAMSUNG CRT : 32mm<br>CPT CRT : 35mm<br>TOSHIBA CRT : 35mm |  <br>Fig. 5-1<br>  <br>Fig. 5-2<br>  <br>Fig. 5-3<br>  <br>Fig. 5-4<br>  <br>  |



# CRT CUT-OFF, BACKGROUND AND SUB-CONTRAST ADJUSTMENT

| No. | Adjusting point | Adjusting procedure/conditions | Waveform and others |
|---|---|---|---|
| 1 | **CRT CUTOFF ADJUSTMENT (I²C BUS CONTROL)** | Remark<br>1. Before CRT cutoff adjustment, SUB-BRIGHT, DRI-RS/RW/RC, DRI-GS/GW/GC, DRI-BS/BW/BC, CUT-R and CUT-G must be INITIAL DATA.<br>2. CRT Cutoff adjustment must be done inside a dark room.<br><br>1. Switch TV to VIDEO mode,BLUE BACK OFF, with NO VIDEO signal.<br>2. Press R/C to set Picture Normal condition.<br>3. First, off the screen by adjust screen variable resistor.<br>*4. Next, checking AKB circuit function by slowly increase screen variable resistor until colour raster suddenly on and off (AKB start function).<br>5. Then continue adjust until retrace line appear.<br>6. Finally, slowly decrease the screen variable resistor until screen retrace line cut off. (Not Raster)<br>Note :<br>Must confirm the AKB function in set before continue the next adjustment. | *Alternative Procedure<br>(1) Step (1), (2), (3) and (4) are same as beside procedure.<br>(2) Then continue adjust until retrace line appear and make sure the colour appear whether red, green or blue.<br>(3) Connect the oscilloscope to related test points as below which is based on colour appear at (2) RED = TP47R, GREEN = TP47G, BLUE = TP47B.<br>(4) Then adjust Screen VR until the tip of signal reach 3.3Vdc.<br>  |
| 2 | **SUB-BRIGHTNESS ADJUSMENT (I²C BUS CONTROL)** | 1. Call " SUB-BRI" in service mode. (Receive Crosshatch pattern with 5 black level windows)<br>*(2) Adjust the " SUB BRIGHT " bus data in order that the line 1and 2 have the same darkness wherelse line 3 is one step (data) brighter than line 2. Finally data minus 1 to make line 1, 2, and 3 are in same level (darkness). | 1<br> <br>Line 3 is one step (data) brighter than line 2<br>2<br> |
| 3 | **WHITE BALANCE SERVICE MODE ADJ. (I²C BUS CONTROL)** | 1. Receive the "WHITE" pattern with BURST signal.<br>2. Press R/C to set Picture NORMAL condition.<br>3. Connect the DC miliammeter between TP602 (-) TP603 (+).<br>4. Check Beam current should be around 800 µA.<br>5. Set it to service mode and adjust the DRI-GS, & DRI-BS data to have a colour temperature of 12300°K or 18000°K ( white ). * Note .<br>6. Receive "WHITE" pattern, WITH BURST signal, and set BRIGHTNESS Y by generator, to **10 cd/m2 (MINOLTA CA-100) by reducing LUMINATE Y signal.<br>7. Adjust "CUT-R" & "CUT-G" to get desired colour temperature #. Then go back NORMAL mode (HIGH BRIGHT**) to check colour temperature. If out of range, back to (1).<br><br>**Note: This adjustment must be done after warming up the unit for 30 minutes or longer with a beam current over 500µA.**<br><br>* ADJUST DRI-GC/GW, DRI-BC/BW as following DATA, after finishing DRI-BS and DRI-GS DATA ADJUSTMENT.<br>DRI-RW = 32 (FIXED), DRI-RS = 32 (FIXED)<br>DRI-BC = "DRI-BS"<br>(For 12300°K And 18000°K Condition) | # 12300°K X : 0.272<br>Y : 0.275<br># 18000°K X : 0.255<br>Y : 0.255<br><br>(MINOLTA COLOUR ANALYZER CA-100)<br>*Note: Above Data can be UP/DOWN by Volume key.<br><br>LOW HIGH<br>14" 10cd/m2 200cd/m2<br><br>* 12300°K DRI-GW="DRI-GS"-7<br>DRI-BW="DRI-BS"-7<br>DRI-GC="DRI-GS"-7<br>DRI-RC=25<br><br>* 18000°K DRI-GW="DRI-GS"-7<br>DRI-BW="DRI-BS"-7<br>DRI-GC="DRI-GS"-5<br>DRI-RC=27 |

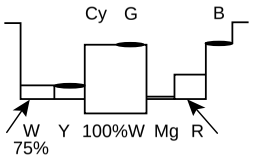
## CRT CUT-OFF, BACKGROUND AND SUB-CONTRAST ADJUSTMENT (Continued)

| No. | Adjusting point | Adjusting procedure/conditions | Waveform and others |
|---|---|---|---|
| 4 | **Max beam check** | 1. Receive the "Monoscope Pattern" signal.<br>2. Press R/C to set Picture NORMAL condition.<br>3. Connect the DC miliammeter between TP603 (+) & TP602 (–).<br>(Full Scale: 3 mA Range)<br>4. Beam current must be within 800 ± 100 µA.(14") | |

## HORIZONTAL AND VERTICAL DEFLECTION LOOP ADJUSTMENT

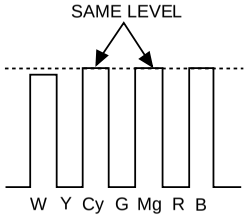
| No. | Adjusting point | Adjusting procedure/conditions | Waveform and others |
|---|---|---|---|
| 1 | **V-SLOPE (I²C BUS CONTROL)** | 1. Receive Monoscope Pattern Signal.<br>2. Call the "V-LIN" mode.<br>3. Increase or decrease "V-LIN" by Volume key till the horizontal line in the center of monoscope is just at the position where the blanking starts. | |
| 2 | **V-SHIFT-50 (I²C BUS CONTROL)** | 1. Call the "V-CENT" mode.<br>2. Increase or decrease "V-CENT" by Volume key till the picture is centered. | |
| 3 | **V-AMP50 (I²C BUS CONTROL)** | 1. Call the "V-AMP" mode.<br>2. Increase or decrease "V-AMP" by Volume key to set overscan of 9.5% typical.<br>Adjustment Spec 9.5% range +1% -0%. | |
| 4 | **H-SHIFT (50) (H-CENTER)** | 1. Call the "H-CENT" mode.<br>2. Increase or decrease "H-CENT" by Volume key to center the picture horizontal. | |
| 5 | **S-CORRECTION (I²C BUS CONTROL)** | 1. SET DATA TO 17.<br>* Check the E-5 CH Monoscope Pattern then re-adjust V-Slope, V-Shift and V-Amp to makesure adjustment is in acceptable Ring-Shaped. | |
| 6 | **SUB-SHARPNESS** | 1. SET DATA TO 20. | |
| 1 | **Focus** | 1. Receive the "Monoscope Pattern" signal.<br>2. Press R/C to set Picture NORMAL condition.<br>3. Adjust the focus control to get the best focusing. | |

## PAL CHROMA ADJUSTMENT

| No. | Adjusting point | Adjusting procedure/conditions | Waveform and others |
|---|---|---|---|
| 1 | **SUB COLOUR (I²C BUS CONTROL)** | 1. Receive the "PAL Colour Bar" signal.<br>2. Press R/C to set Picture Normal condition.<br>3. Connect the oscilloscope to Red cathode(D881 Cathode).<br>● Range : 20 V/div. (AC) (Using 10:1 probe)<br>● Sweep time : 10 µsec/div.<br>4. Using the R/C call "SUB COL" in SERVICE mode. Adjust SUB COLOUR bus data, so that the 75% White & Red portions of PAL Color Bar be at the same level shown as **Fig. 1-1**.<br>5. Clear the SERVICE mode. |  <br>Fig. 1-1 |



## NTSC CHROMA ADJUSTMENT

| No. | Adjusting point | Adjusting procedure/conditions | Waveform and others |
|---|---|---|---|
| 1 | **SUB-TINT (I²C BUS CONTROL)** | 1. Receive the "NTSC 3.58 Colour Bar" signal thru AV in.<br>2. Connect the oscilloscope to TP47B (P882 pin 5) BLUE-OUT.<br>● Range : 100mV/div. (AC)(Use Probe 10:1)<br>● Sweep time : 10 µsec/div.<br>3. Call the "SUB-TINT" mode in service mode. Adjust the "SUB-TINT" bus data to obtain the waveform shown as Fig. 1-1.<br>4. Clear the SERVICE mode. |  <br>Fig. 1-1 |

## PROTECTOR OPERATION CHECKING

| No. | Adjusting point | Adjusting procedure/conditions | Waveform and others |
|---|---|---|---|
| 1 | **BEAM PROTECTOR** | 1. Receive "Monoscope Pattern" signal.<br>2. Set CONTRAST MAX.<br>3. Set BRIGHT MAX.<br>4. During the Collector & Emitter of Q883/5/7 short, make sure the protector ON and switch to standby mode. | * Select one of Q883/5/7 to do each short test. |
| 2 | **H•V PROTECTOR** | 1. Receive "Monoscope Pattern" signal.<br>2. Connect output of Bias Box to D603 cathode (R610 side).<br>3. Set voltage of Bias Box to 18V and make sure the protector is not work.<br>4. Set voltage of Bias Box to 27V, and make sure the protector is work. | |
| 3 | **Other protectors** | 1. Once finish rectified Electrolytic Capacitor short testing in +B line, check all possible damaged components on +B line.<br>(Use random selected set for inspection) | |

## A/V INPUT AND OUTPUT CHECKING

| No. | Adjusting point | Adjusting procedure/conditions | Waveform and others |
|---|---|---|---|
| 1 | **VIDEO AND AUDIO OUTPUT CHECK** | 1. Receive the "PAL Color Bar" signal (100% White Color Bar, Sound 400 Hz 100% Mod).<br>2. Terminate the Video output with a 75 ohm impedance. Make sure the output is as specified (1.0 Vp-p ±3 dB).<br>3. Terminate the Audio output with a 10k ohm impedance. Make sure the O/P is as specified (1.76 Vp-p ±3 dB). | |
| 2 | **VIDEO AND AUDIO INPUT CHECK** | 1. Using the TV/AV key on the remote controller, make sure that the modes change in order of TV, AV & TV again and the video & audio output are according to the input terminal for each mode.If connect input to Front and Rear AV terminal, input terminal of Front AV will be selected. | |

# FUNCTION OPERATION CHECKING (VIDEO AND AUDIO)

| No. | Adjusting point | Adjusting procedure/conditions | Waveform and others |
|---|---|---|---|
| 1 | **CONTRAST key** | 1. Receive "Monoscope Pattern" signal.<br>2. Set P-Mode to select CONTRAST.<br>3. Press Volume Up/Down key to check whether the CONTRAST effect is OK or not. | |
| 2 | **COLOUR key** | 1. Receive "Color Bar" signal.<br>2. Set P-Mode to select COLOUR.<br>3. Press Volume Up/Down key to check whether the COLOUR effect is OK or not. | |
| 3 | **BRIGHTNESS key** | 1. Receive "Monoscope Pattern" signal.<br>2. Set P-Mode to select BRIGHTNESS.<br>3. Press Volume Up/Down key to check whether the BRIGHTNESS effect is OK or not. | |
| 4 | **TINT key** | 1. Receive the "NTSC Colour Bar" signal thru AV in.<br>2. Set P-Mode to select TINT.<br>3. Press Volume Up/Down key to check TINT, UP for GREEN direction and DOWN for PURPLE direction whether is OK or not. | |
| 5 | **SHARPNESS Key** | 1. Receive "Monoscope Pattern" signal.<br>2. Set P-mode to select SHARPNESS.<br>3. Press Volume Up/Down key to check whether the SHARPNESS effect is OK or not. | |
| 6 | **CH DISPLAY COLOUR** | 1. All Ch (1~99) will have an OSD display of the channel number in green colour under AFT ON condition. | |
| 7 | **NORMAL Key** | 1. Once in PICTURE Mode, and theNORMAL key is pressed, all the settings will be present to normal setting.<br>(Normal setting value for every mode).<br>● CONTRAST : MAX<br>● COLOUR : CENTER<br>● BRIGHTNESS : CENTER<br>● TINT : CENTER<br>● SHARPNESS : CENTER | **Notes:If nothing is display mean contrast, colour, bright, tint, sharpness are all in normal setting.** |
| 8 | **WHITE TEMP** | 1. Receive "Monoscope Pattern" signal.<br>2. Set FUNCTION to select WHITE TEMP.<br>3. Press Volume Up/Down key to check WHITE TEMP Option, STANDARD:<br>NORMAL SETTING, WARM for more REDDISH direction changing, COOL for more BLUISH direction changing. | |



# FUNCTION OPERATION CHECKING (VIDEO AND AUDIO)
## (Continued)

| No. | Adjusting point | Adjusting procedure/conditions | Waveform and others |
|---|---|---|---|
| 9 | **COLOUR SYSTEM** | 1. Receive the "PAL COLOUR BAR" signal, press the COLOUR SYSTEM key to select modes except PAL, check the COLOUR is not working properly. Then, select the "PAL" mode. Check again its colour so that it is working properly.<br>2. Receive "SECAM COLOUR BAR" signal, press COLOUR SYSTEM key to select modes except SECAM, check the COLOUR is not working properly. Then, select the "SECAM" mode. Check again its colour so that it is working properly.<br>3. Receive "NTSC 4.43/3.58 COLOUR BAR" signal thru AV, press COLOUR SYSTEM key to select modes except N4.43/3.58, check the COLOUR is not working properly. Then, select the "NTSC 4.43/3.58" mode. Check again its colour so that it is working properly. | |
| 10 | **SOUND SYSTEM** | 1. Receive "PAL-D/K" signal, press the "SOUND SYSTEM" to select B/G, I. Check the sound output is not working properly. Select D/K and check the sound output to make sure it is working properly.<br>2. Receive "PAL-I" signal, press the "SOUND SYSTEM" to select B/G, D/K. Check the sound output is not working properly. Select I and check the sound output to make sure it is working properly.<br>3. Receive "PAL-B/G" signal, press the "SOUND SYSTEM"to select I, D/K. Check the sound output is not working properly. Select B/G and check the sound output to make sure it is working properly. | |
| 11 | **NOISE MUTE CHECKING** | 1. Receive "PAL COLOUR BAR" signal.<br>2. Turn up the volume control to maximum, make sure the sound is heard from the speakers. Then put the unit in no signal state.<br>3. Check the sound mute is effective.<br>4. Finally turn sound level of CTV to minimum. | |
| 12 | **OSD LANGUAGE QUANTITY CHECK** | Check OSD LANGUAGE quantity and type as English, Russian, Chinese, French, Arabic and Malay. | |

# MEMORY MAP

| ADDRESS (HEX) | DATA D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | MICON DEFAULT | EEPROM RANGE | EEPROM WRITE(CPU) | CHASSIS CHECK DATA | CHASSIS CHECK TYPE | CTV FINAL CHECK DATA | CTV FINAL CHECK TYPE | LAST INITIAL SETTING DATA | REMARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00 | PASS WORD | | | | | | | | 55 | 00-FF | | | | | | | |
| 01 | PASS WORD | | | | | | | | 4F | 00-FF | | | | | | | |
| 02 | PASS WORD | | | | | | | | 43 | 00-FF | | | | | | | |
| 03 | PASS WORD | | | | | | | | A1 | 00-FF | | | | | | | |
| 04 | | | | | | | | | | | | | | | | | |
| 05 | | | | | | | | | | | | | | | | | |
| 06 | AGC TAKE-OVER | | | | | | | | 0E | 00-3F | | | | | | | |
| 07 | V-SLOPE | | | | | | | | 20 | 00-3F | | | | | | | |
| 08 | V-AMPLITUDE | | | | | | | | 20 | 00-3F | | | | | | | |
| 09 | V-CENTER | | | | | | | | 20 | 00-3F | | | | | | | |
| 0A | H-CENTER | | | | | | | | 20 | 00-3F | | | | | | | |
| 0B | H-SIZE | | | | | | | | 20 | 00-3F | | | | | | | |
| 0C | EW-PARALLELOGRAM | | | | | | | | 20 | 00-3F | | | | | | | |
| 0D | EW-PARABOLA/WIDTH | | | | | | | | 20 | 00-3F | | | | | | | |
| 0E | EW-UPPER CORNER | | | | | | | | 20 | 00-3F | | | | | | | |
| 0F | EW-LOWER CORNER | | | | | | | | 20 | 00-3F | | | | | | | |
| 10 | EW-TRAPEZIUM | | | | | | | | 20 | 00-3F | | | | | | | |
| 11 | HORIZONTAL-BOW | | | | | | | | 20 | 00-3F | | | | | | | |
| 12 | S-CORRECTION | | | | | | | | 00 | 00-3F | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | |
| 16 | DRIVE-R (STANDARD) | | | | | | | | 20 | 00-3F | | | | | | | |
| 17 | DRIVE-G (STANDARD) | | | | | | | | 20 | 00-3F | | | | | | | |
| 18 | DRIVE-B (STANDARD) | | | | | | | | 20 | 00-3F | | | | | | | |
| 19 | DRIVE-R (WARM) | | | | | | | | 20 | 00-3F | | | | | | | |
| 1A | DRIVE-G (WARM) | | | | | | | | 20 | 00-3F | | | | | | | |
| 1B | DRIVE-B (WARM) | | | | | | | | 20 | 00-3F | | | | | | | |
| 1C | DRIVE-R (COOL) | | | | | | | | 19 | 00-3F | | | | | | | |
| 1D | DRIVE-G (COOL) | | | | | | | | 20 | 00-3F | | | | | | | |
| 1E | DRIVE-B (COOL) | | | | | | | | 20 | 00-3F | | | | | | | |
| 1F | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | |
| 22 | SUB-VOLUME | | | | | | | | 3F | 00-3F | | | | | | | |
| 23 | SUB-CONTRAST | | | | | | | | 3F | 00-3F | | | | | | | |
| 24 | SUB-COLOUR | | | | | | | | 20 | 00-3F | | | | | | | |
| 25 | SUB-BRIGHTNESS | | | | | | | | 20 | 00-3F | | | | | | | |
| 26 | SUB-TINT | | | | | | | | 20 | 00-3F | | | | | | | |
| 27 | SUB-SHARPNESS | | | | | | | | 20 | 00-3F | | | | | | | |
| 28 | HTL-VOLUME | | | | | | | | 20 | 00-3F | | | | | | | |
| 29 | HTL-POSITION | | | | | | | | FF | 00-FF | | | | | | | |
| 2A | | | | | | | | | | | | | | | | | |
| 2B | | | | | | | | | | | | | | | | | |
| 2C | | | | | | | | | | | | | | | | | |
| 2D | OSD-REFERENCE | | | | | | | | 0F | 00-0F | | | | | | | |
| 2E | CUTOFF LEVEL -OFFSET R | | | | | | | | 20 | 00-3F | | | | | | | (1) 20th August 2001: Change of range & default. |
| 2F | CUTOFF LEVEL -OFFSET G | | | | | | | | 20 | 00-3F | | | | | | | |
| 30 | | | | | CATHODE DRIVE LEVEL | | | | 00 | 00-0F | | | | | | | |
| 31 | | | | | Y-DELAY (TV PAL) | | | | 0C | 00-0F | | | | | | | |
| 32 | | | | | Y-DELAY (TV SECAM) | | | | 0F | 00-0F | | | | | | | |
| 33 | | | | | Y-DELAY (TV N358) | | | | 0C | 00-0F | | | | | | | |
| 34 | | | | | Y-DELAY (TV N443) | | | | 0C | 00-0F | | | | | | | |
| 35 | | | | | Y-DELAY (TV BW) | | | | 0C | 00-0F | | | | | | | |
| 36 | | | | | Y-DELAY (AV PAL) | | | | 0C | 00-0F | | | | | | | |
| 37 | | | | | Y-DELAY (AV SECAM) | | | | 0F | 00-0F | | | | | | | |
| 38 | | | | | Y-DELAY (AV N358) | | | | 0C | 00-0F | | | | | | | |
| 39 | | | | | Y-DELAY (AV N443) | | | | 0C | 00-0F | | | | | | | |
| 3A | | | | | Y-DELAY (AV BW) | | | | 0C | 00-0F | | | | | | | |
| 3B | | | | | COLOUR-OFFSET (PAL) | | | | 08 | 00-0F | | | | | | | |
| 3C | | | | | COLOUR-OFFSET (SECAM) | | | | 08 | 00-0F | | | | | | | |
| 3D | | | | | COLOUR-OFFSET (N358) | | | | 04 | 00-0F | | | | | | | |
| 3E | | | | | COLOUR-OFFSET (N443) | | | | 04 | 00-0F | | | | | | | |
| 3F | | | | | SHARPNESS-OFFSET (PAL) | | | | 08 | 00-0F | | | | | | | |
| MODEL | | | | | | | | | MODEL | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| LETTER NO. | | | | | | | | | LETTER NO. | | | | | | | | |



| ADDRESS (HEX) | DATA D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | MICON DEFAULT | EEPROM RANGE | EEPROM WRITE(CPU) | CHASSIS CHECK DATA | CHASSIS CHECK TYPE | CTV FINAL CHECK DATA | CTV FINAL CHECK TYPE | LAST INITIAL SETTING DATA | REMARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 40 | SHARPNESS-OFFSET (SECAM) | | | | | | | | 04 | 00-0F | | | | | | | |
| 41 | SHARPNESS-OFFSET (N358) | | | | | | | | 0C | 00-0F | | | | | | | |
| 42 | SHARPNESS-OFFSET (N443) | | | | | | | | 08 | 00-0F | | | | | | | |
| 43 | | | | | | | | | | | | | | | | | |
| 44 | FCO | ACL | OSO | EHT | EVG | FFI | AVL | BKS | 1B | 00-FF | | | | | | | |
| 45 | SECAM | N443 | N358 | PB-SECAM | BG | I | DK | M | DE | 00-FF | | | | | | | |
| 46 | SM1 | SM0 | FMWS | AV | BTSC | HTL | VMC | VMI | 53 | 00-FF | | | | | | | |
| 47 | HP2 | FSL | RUS | FRA | CHN | MLY | ARB | THA | 3E | 00-FF | | | | | | | |
| 48 | FOB-AV | FOA-AV | FOB-FE | FOA-FE | AGC1 | AGC0 | BIL | CPT | C4 | 00-FF | | | | | | | |
| 49 | | | | | | NDF | MSA | LED-F | 00 | 00-03 | | | | | | | (1) 20th August 2001: Added 3 new items. |
| 4A | | | | | | | | | | | | | | | | | |
| 4B | | | | | | | | | | | | | | | | | |
| 4C | VOLUME | | | | | | | | 01 | 00-3C | | | | | | | |
| 4D | CONTRAST | | | | | | | | 3C | 00-3C | | | | | | | |
| 4E | COLOUR | | | | | | | | 1E | 00-3C | | | | | | | |
| 4F | BRIGHTNESS | | | | | | | | 1E | 00-3C | | | | | | | |
| 50 | TINT | | | | | | | | 1E | 00-3C | | | | | | | |
| 51 | SHARPNESS | | | | | | | | 1E | 00-3C | | | | | | | |
| 52 | | | | | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | | | | | |
| 55 | POSITION/AV1/AV2 | | | | | | | | 01 | 00-FF | | | | | | | |
| 56 | FAV-POS A | | | | | | | | 0A | 00-FF | | | | | | | |
| 57 | FAV-POS B | | | | | | | | 14 | 00-FF | | | | | | | |
| 58 | FAV-POS C | | | | | | | | 1E | 00-FF | | | | | | | |
| 59 | FAV-POS D | | | | | | | | 28 | 00-FF | | | | | | | |
| 5A | | | | | | | | | | | | | | | | | |
| 5B | | | | | | | | | | | | | | | | | |
| 5C | LAST POWER MODE | | | | | | | | 00 | 00-01 | | | | | | | |
| 5D | WHITE-TEMP | | | | | | | | 00 | 00-02 | | | | | | | |
| 5E | BLUE BACK | | | | | | | | 00 | 00-01 | | | | | | | |
| 5F | LANGUAGE | | | | | | | | 00 | 00-07 | | | | | | | |
| 60 | LAST DIGIT MODE (1 OR 2) | | | | | | | | 00 | 00-01 | | | | | | | |
| 61 | | | | | | | | | | | | | | | | | |
| 62 | SKIP 0 | SKIP 1 | SKIP 2 | SKIP 3 | SKIP 4 | SKIP 5 | SKIP 6 | SKIP 7 | 80 | 00-FF | | | | | | | |
| 63 | SKIP 8 | SKIP 9 | SKIP 10 | SKIP 11 | SKIP 12 | SKIP 13 | SKIP 14 | SKIP 15 | 00 | 00-FF | | | | | | | |
| 64 | SKIP 16 | SKIP 17 | SKIP 18 | SKIP 19 | SKIP 20 | SKIP 21 | SKIP 22 | SKIP 23 | 00 | 00-FF | | | | | | | |
| 65 | SKIP 24 | SKIP 25 | SKIP 26 | SKIP 27 | SKIP 28 | SKIP 29 | SKIP 30 | SKIP 31 | 00 | 00-FF | | | | | | | |
| 66 | SKIP 32 | SKIP 33 | SKIP 34 | SKIP 35 | SKIP 36 | SKIP 37 | SKIP 38 | SKIP 39 | 00 | 00-FF | | | | | | | |
| 67 | SKIP 40 | SKIP 41 | SKIP 42 | SKIP 43 | SKIP 44 | SKIP 45 | SKIP 46 | SKIP 47 | 00 | 00-FF | | | | | | | |
| 68 | SKIP 48 | SKIP 49 | SKIP 50 | SKIP 51 | SKIP 52 | SKIP 53 | SKIP 54 | SKIP 55 | 00 | 00-FF | | | | | | | |
| 69 | SKIP 56 | SKIP 57 | SKIP 58 | SKIP 59 | SKIP 60 | SKIP 61 | SKIP 62 | SKIP 63 | 00 | 00-FF | | | | | | | |
| 6A | SKIP 64 | SKIP 65 | SKIP 66 | SKIP 67 | SKIP 68 | SKIP 69 | SKIP 70 | SKIP 71 | 00 | 00-FF | | | | | | | |
| 6B | SKIP 72 | SKIP 73 | SKIP 74 | SKIP 75 | SKIP 76 | SKIP 77 | SKIP 78 | SKIP 79 | 00 | 00-FF | | | | | | | |
| 6C | SKIP 80 | SKIP 81 | SKIP 82 | SKIP 83 | SKIP 84 | SKIP 85 | SKIP 86 | SKIP 87 | 00 | 00-FF | | | | | | | |
| 6D | SKIP 88 | SKIP 89 | SKIP 90 | SKIP 91 | SKIP 92 | SKIP 93 | SKIP 94 | SKIP 95 | 00 | 00-FF | | | | | | | |
| 6E | SKIP 96 | SKIP 97 | SKIP 98 | SKIP 99 | | | | | 00 | 00-FF | | | | | | | |
| 6F | | | | | | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | | | | | | |
| 71 | | | | | | | | | | | | | | | | | |
| 72 | | | | | | | | | | | | | | | | | |
| 73 | | | | | | | | | | | | | | | | | |
| 74 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | S-SYS | | | | | | POS 0 |
| 75 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | 000:BG | | | | | | |
| 76 | S-SYS | | | AFT | (auto) | | | C-SYS | | | 001:I | | | | | | |
| 77 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | 010:DK | | | | | | POS 1 |
| 78 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | 011:M | | | | | | |
| 79 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 7A | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | AFT | | | | | | POS 2 |
| 7B | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | 0:OFF | | | | | | |
| 7C | S-SYS | | | AFT | (auto) | | | C-SYS | | | 1:ON | | | | | | |
| 7D | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 3 |
| 7E | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 7F | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| MODEL | | | | | | | | | MODEL | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| LETTER NO. | | | | | | | | | LETTER NO. | | | | | | | | |

| ADDRESS (HEX) | DATA D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | MICON DEFAULT | EEPROM RANGE | EEPROM WRITE(CPU) | CHASSIS CHECK DATA | CHASSIS CHECK TYPE | CTV FINAL CHECK DATA | CTV FINAL CHECK TYPE | LAST INITIAL SETTING DATA | REMARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 4 |
| 81 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 82 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 83 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 5 |
| 84 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 85 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 86 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 6 |
| 87 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 88 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 89 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 7 |
| 8A | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 8B | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 8C | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 8 |
| 8D | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 8E | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 8F | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 9 |
| 90 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 91 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 92 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 10 |
| 93 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 94 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 95 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 11 |
| 96 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 97 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 98 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 12 |
| 99 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 9A | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 9B | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 13 |
| 9C | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 9D | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 9E | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 14 |
| 9F | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| A0 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| A1 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 15 |
| A2 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| A3 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| A4 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 16 |
| A5 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| A6 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| A7 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 17 |
| A8 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| A9 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| AA | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 18 |
| AB | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| AC | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| AD | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 19 |
| AE | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| AF | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| B0 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 20 |
| B1 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| B2 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| B3 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 21 |
| B4 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| B5 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| B6 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 22 |
| B7 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| B8 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| B9 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 23 |
| BA | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| BB | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| BC | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 24 |
| BD | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| BE | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| BF | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 25 |
| MODEL | | | | | | | | | MODEL | | | | | | | | |
| LETTER NO. | | | | | | | | | LETTER NO. | | | | | | | | |



| ADDRESS (HEX) | DATA D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | MICON DEFAULT | EEPROM RANGE | EEPROM WRITE(CPU) | CHASSIS CHECK DATA | CHASSIS CHECK TYPE | CTV FINAL CHECK DATA | CTV FINAL CHECK TYPE | LAST INITIAL SETTING DATA | REMARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C0 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | POS 25 |
| C1 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| C2 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 26 |
| C3 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| C4 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| C5 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 27 |
| C6 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| C7 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| C8 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 28 |
| C9 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| CA | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| CB | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 29 |
| CC | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| CD | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| CE | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 30 |
| CF | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| D0 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| D1 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 31 |
| D2 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| D3 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| D4 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 32 |
| D5 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| D6 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| D7 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 33 |
| D8 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| D9 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| DA | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 34 |
| DB | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| DC | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| DD | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 35 |
| DE | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| DF | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| E0 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 36 |
| E1 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| E2 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| E3 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 37 |
| E4 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| E5 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| E6 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 38 |
| E7 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| E8 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| E9 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 39 |
| EA | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| EB | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| EC | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 40 |
| ED | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| EE | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| EF | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 41 |
| F0 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| F1 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| F2 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 42 |
| F3 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| F4 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| F5 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 43 |
| F6 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| F7 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| F8 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 44 |
| F9 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| FA | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| FB | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 45 |
| FC | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| FD | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| FE | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 46 |
| FF | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| MODEL | | | | | | | | | MODEL | | | | | | | | |
| LETTER NO. | | | | | | | | | LETTER NO. | | | | | | | | |

| ADDRESS (HEX) | DATA D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | MICON DEFAULT | EEPROM RANGE | EEPROM WRITE(CPU) | CHASSIS CHECK DATA | CHASSIS CHECK TYPE | CTV FINAL CHECK DATA | CTV FINAL CHECK TYPE | LAST INITIAL SETTING DATA | REMARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | POS 46 |
| 101 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 47 |
| 102 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 103 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 104 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 48 |
| 105 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 106 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 107 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 49 |
| 108 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 109 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 10A | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 50 |
| 10B | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 10C | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 10D | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 51 |
| 10E | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 10F | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 110 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 52 |
| 111 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 112 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 113 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 53 |
| 114 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 115 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 116 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 54 |
| 117 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 118 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 119 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 55 |
| 11A | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 11B | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 11C | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 56 |
| 11D | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 11E | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 11F | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 57 |
| 120 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 121 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 122 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 58 |
| 123 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 124 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 125 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 59 |
| 126 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 127 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 128 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 60 |
| 129 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 12A | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 12B | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 61 |
| 12C | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 12D | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 12E | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 62 |
| 12F | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 130 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 131 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 63 |
| 132 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 133 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 134 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 64 |
| 135 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 136 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 137 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 65 |
| 138 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 139 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 13A | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 66 |
| 13B | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 13C | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 13D | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 67 |
| 13E | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 13F | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| MODEL | | | | | | | | | MODEL | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| LETTER NO. | | | | | | | | | LETTER NO. | | | | | | | | |



| ADDRESS (HEX) | DATA D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | MICON DEFAULT | EEPROM RANGE | EEPROM WRITE(CPU) | CHASSIS CHECK DATA | CHASSIS CHECK TYPE | CTV FINAL CHECK DATA | CTV FINAL CHECK TYPE | LAST INITIAL SETTING DATA | REMARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 140 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 68 |
| 141 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 142 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 143 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 69 |
| 144 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 145 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 146 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 70 |
| 147 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 148 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 149 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 71 |
| 14A | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 14B | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 14C | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 72 |
| 14D | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 14E | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 14F | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 73 |
| 150 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 151 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 152 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 74 |
| 153 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 154 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 155 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 75 |
| 156 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 157 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 158 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 76 |
| 159 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 15A | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 15B | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 77 |
| 15C | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 15D | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 15E | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 78 |
| 15F | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 160 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 161 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 79 |
| 162 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 163 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 164 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 80 |
| 165 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 166 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 167 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 81 |
| 168 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 169 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 16A | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 82 |
| 16B | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 16C | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 16D | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 83 |
| 16E | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 16F | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 170 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 84 |
| 171 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 172 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 173 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 85 |
| 174 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 175 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 176 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 86 |
| 177 | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 178 | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 179 | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 87 |
| 17A | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 17B | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 17C | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 88 |
| 17D | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | |
| 17E | | S-SYS | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 17F | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | POS 89 |
| MODEL | | | | | | | | | MODEL | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| LETTER NO. | | | | | | | | | LETTER NO. | | | | | | | | |

| ADDRESS (HEX) | DATA D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | MICON DEFAULT | EEPROM RANGE | EEPROM WRITE(CPU) | CHASSIS CHECK DATA | CHASSIS CHECK TYPE | CTV FINAL CHECK DATA | CTV FINAL CHECK TYPE | LAST INITIAL SETTING DATA | REMARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 180 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | POS 89 |
| 181 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 182 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 90 |
| 183 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 184 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 185 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 91 |
| 186 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 187 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 188 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 92 |
| 189 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 18A | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 18B | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 93 |
| 18C | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 18D | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 18E | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 94 |
| 18F | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 190 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 191 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 95 |
| 192 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 193 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 194 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 96 |
| 195 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 196 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 197 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 97 |
| 198 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 199 | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 19A | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 98 |
| 19B | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 19C | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 19D | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 99 |
| 19E | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 19F | S-SYS | | | AFT | (auto) | | | C-SYS | | | | | | | | | |
| 1A0 | | | | | | | | | | | | | | | | | AV1 |
| 1A1 | | | | | | | | | | | | | | | | | |
| 1A2 | | | | | (auto) | | | C-SYS | | | | | | | | | |
| 1A3 | | | | | | | | | | | | | | | | | AV2 |
| 1A4 | | | | | | | | | | | | | | | | | |
| 1A5 | | | | | (auto) | | | C-SYS | | | | | | | | | |
| 1A6 | | | | | | | | | | | | | | | | | |
| 1A7 | | | | | | | | | | | | | | | | | |
| 1A8 | | | | | | | | | | | | | | | | | |
| 1A9 | | | | | | | | | | | | | | | | | |
| 1AA | | | | | | | | | | | | | | | | | |
| 1AB | | | | | | | | | | | | | | | | | |
| 1AC | | | | | | | | | | | | | | | | | |
| 1AD | | | | | | | | | | | | | | | | | |
| 1AE | | | | | | | | | | | | | | | | | |
| 1AF | | | | | | | | | | | | | | | | | |
| 1B0 | | | | | | | | | | | | | | | | | |
| 1B1 | | | | | | | | | | | | | | | | | |
| 1B2 | | | | | | | | | | | | | | | | | |
| 1B3 | | | | | | | | | | | | | | | | | |
| 1B4 | | | | | | | | | | | | | | | | | |
| 1B5 | | | | | | | | | | | | | | | | | |
| 1B6 | | | | | | | | | | | | | | | | | |
| 1B7 | | | | | | | | | | | | | | | | | |
| 1B8 | | | | | | | | | | | | | | | | | |
| 1B9 | | | | | | | | | | | | | | | | | |
| 1BA | | | | | | | | | | | | | | | | | |
| 1BB | | | | | | | | | | | | | | | | | |
| 1BC | | | | | | | | | | | | | | | | | |
| 1BD | | | | | | | | | | | | | | | | | |
| 1BE | | | | | | | | | | | | | | | | | |
| 1BF | | | | | | | | | | | | | | | | | |
| MODEL | | | | | | | | | | MODEL | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| LETTER NO. | | | | | | | | | | LETTER NO. | | | | | | | |



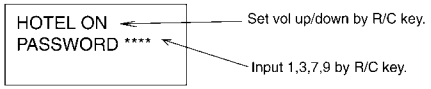
| ADDRESS (HEX) | DATA D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | MICON DEFAULT | EEPROM RANGE | EEPROM WRITE(CPU) | CHASSIS CHECK DATA | CHASSIS CHECK TYPE | CTV FINAL CHECK DATA | CTV FINAL CHECK TYPE | LAST INITIAL SETTING DATA | REMARK |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1C0 | | | | | | | | | | | | | | | | | |
| 1C1 | | | | | | | | | | | | | | | | | |
| 1C2 | | | | | | | | | | | | | | | | | |
| 1C3 | | | | | | | | | | | | | | | | | |
| 1C4 | | | | | | | | | | | | | | | | | |
| 1C5 | | | | | | | | | | | | | | | | | |
| 1C6 | | | | | | | | | | | | | | | | | |
| 1C7 | | | | | | | | | | | | | | | | | |
| 1C8 | | | | | | | | | | | | | | | | | |
| 1C9 | | | | | | | | | | | | | | | | | |
| 1CA | | | | | | | | | | | | | | | | | |
| 1CB | | | | | | | | | | | | | | | | | |
| 1CC | | | | | | | | | | | | | | | | | |
| 1CD | | | | | | | | | | | | | | | | | |
| 1CE | | | | | | | | | | | | | | | | | |
| 1CF | | | | | | | | | | | | | | | | | |
| 1D0 | | | | | | | | | | | | | | | | | |
| 1D1 | | | | | | | | | | | | | | | | | |
| 1D2 | | | | | | | | | | | | | | | | | |
| 1D3 | | | | | | | | | | | | | | | | | |
| 1D4 | | | | | | | | | | | | | | | | | |
| 1D5 | | | | | | | | | | | | | | | | | |
| 1D6 | | | | | | | | | | | | | | | | | |
| 1D7 | | | | | | | | | | | | | | | | | |
| 1D8 | | | | | | | | | | | | | | | | | |
| 1D9 | | | | | | | | | | | | | | | | | |
| 1DA | | | | | | | | | | | | | | | | | |
| 1DB | | | | | | | | | | | | | | | | | |
| 1DC | | | | | | | | | | | | | | | | | |
| 1DD | | | | | | | | | | | | | | | | | |
| 1DE | | | | | | | | | | | | | | | | | |
| 1DF | | | | | | | | | | | | | | | | | |
| 1E0 | | | | | | | | | | | | | | | | | |
| 1E1 | | | | | | | | | | | | | | | | | |
| 1E2 | | | | | | | | | | | | | | | | | |
| 1E3 | | | | | | | | | | | | | | | | | |
| 1E4 | | | | | | | | | | | | | | | | | |
| 1E5 | | | | | | | | | | | | | | | | | |
| 1E6 | | | | | | | | | | | | | | | | | |
| 1E7 | | | | | | | | | | | | | | | | | |
| 1E8 | | | | | | | | | | | | | | | | | |
| 1E9 | | | | | | | | | | | | | | | | | |
| 1EA | | | | | | | | | | | | | | | | | |
| 1EB | | | | | | | | | | | | | | | | | |
| 1EC | | | | | | | | | | | | | | | | | |
| 1ED | | | | | | | | | | | | | | | | | |
| 1EE | | | | | | | | | | | | | | | | | |
| 1EF | | | | | | | | | | | | | | | | | |
| 1F0 | | | | | | | | | | | | | | | | | |
| 1F1 | | | | | | | | | | | | | | | | | |
| 1F2 | | | | | | | | | | | | | | | | | |
| 1F3 | | | | | | | | | | | | | | | | | |
| 1F4 | | | | | | | | | | | | | | | | | |
| 1F5 | | | | | | | | | | | | | | | | | |
| 1F6 | | | | | | | | | | | | | | | | | |
| 1F7 | | | | | | | | | | | | | | | | | |
| 1F8 | | | | | | | | | | | | | | | | | |
| 1F9 | | | | | | | | | | | | | | | | | |
| 1FA | | | | | | | | | | | | | | | | | |
| 1FB | | | | | | | | | | | | | | | | | |
| 1FC | | | | | | | | | | | | | | | | | |
| 1FD | | | | | | | | | | | | | | | | | |
| 1FE | | | | | | | | | | | | | | | | | |
| 1FF | | | | | | | | | | | | | | | | | |
| MODEL | | | | | | | | | | MODEL | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| LETTER NO. | | | | | | | | | | LETTER NO. | | | | | | | |

## GA1 HOTEL MODE APPLICATION

How to enable/disable the "Hotel Mode" ?

Ans: a) Press the R/C (FUNCTION) {1} key until language selection appear, within five second press the (one/two digit) {2} key and keep pressing it for five second, then you can see the hotel mode with four digits pass-word.

b) Key in the four digits password starting with number "1", "3", "7", "9", then the hotel mode will be enable, you can switch on/off the hotel mode by using R/C (volume up/down) {3} key.




#1 Ch 1 is your selected channel for hotel mode.

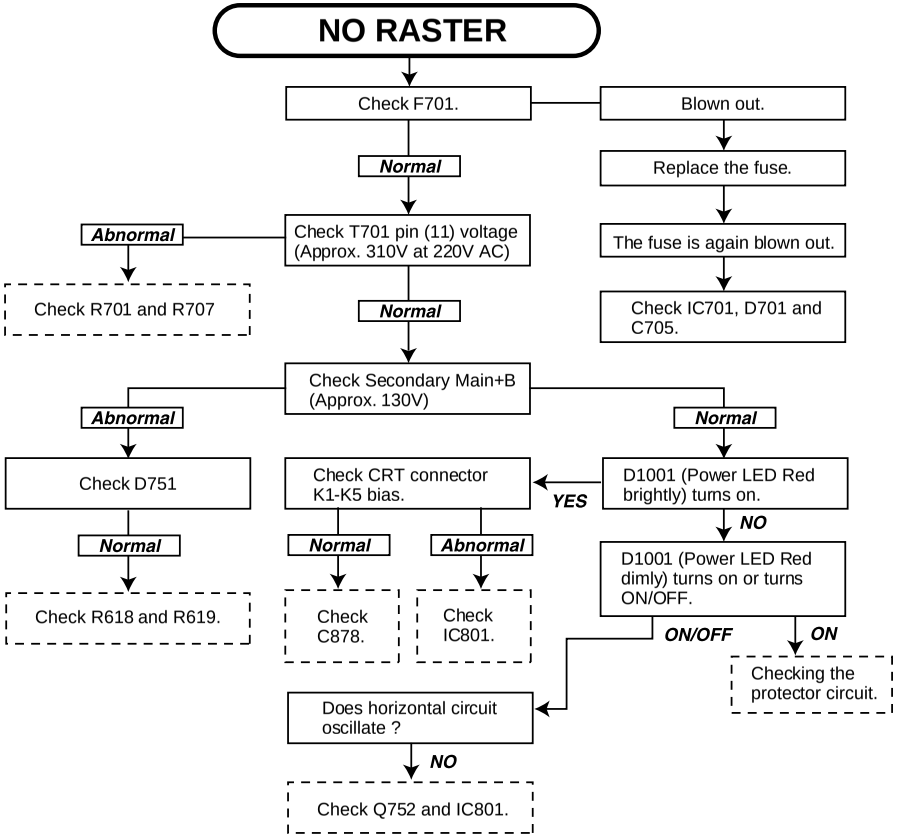
* We recommend
  Before set the hotel mode, it is better to choose ch 1 & set s-vol level Up to 75% full scale.
  After set hotel mode, starting channel will be always ch 1 & maximum sound level out will be set the half of full scale.
* If you set hotel mode in AV, starting channel will be the last ch which you received before power off (same as normal operation)

## CONDITION:

When using hotel mode, user can control "contrast", "brightness", "sharpness" and "tint" function.
But after power off, it will return to the initial setting.
You can't use:--
Preset mode
Fine tuning
Skip mode
System selection
The others function is allowed to be used.

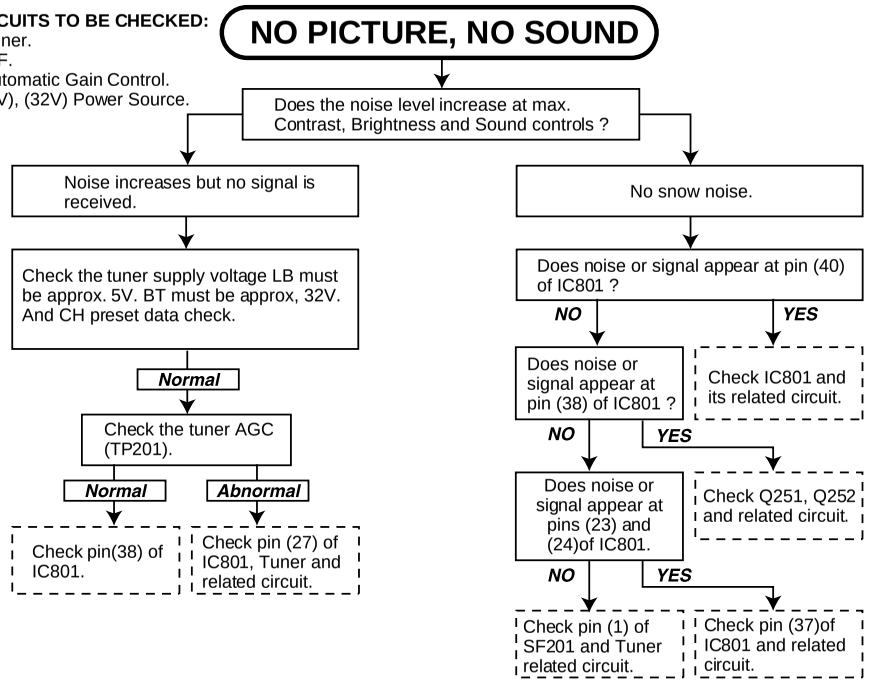


## TROUBLE SHOOTING TABLE

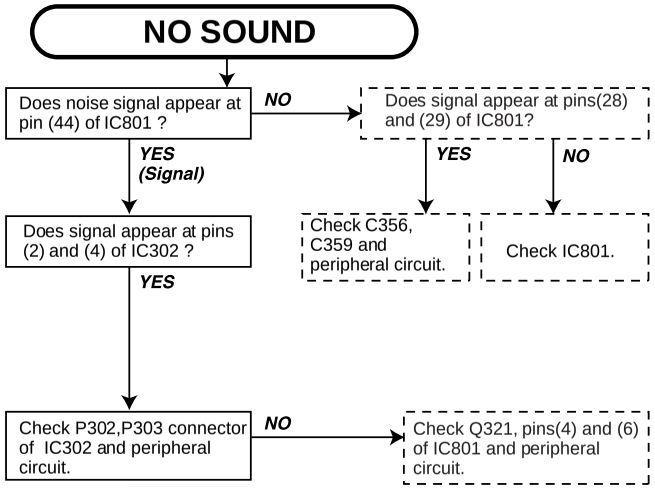


## TROUBLE SHOOTING TABLE (Continued)

**CIRCUITS TO BE CHECKED:**
- Tuner.
- PIF.
- Automatic Gain Control.
- (5V), (32V) Power Source.



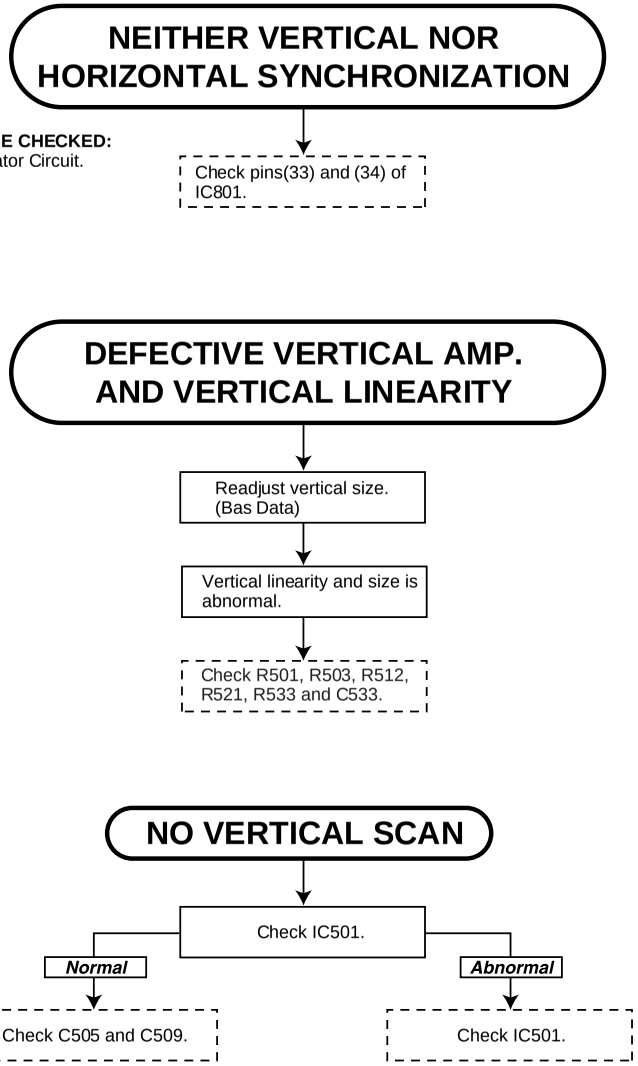

**CIRCUITS TO BE CHECKED:**
- Sound system pins (28), (29) and (44) of IC801.
- Sound Detector Circuit.
- Sound Switch and Att. Control.
- Audio Output Circuit.



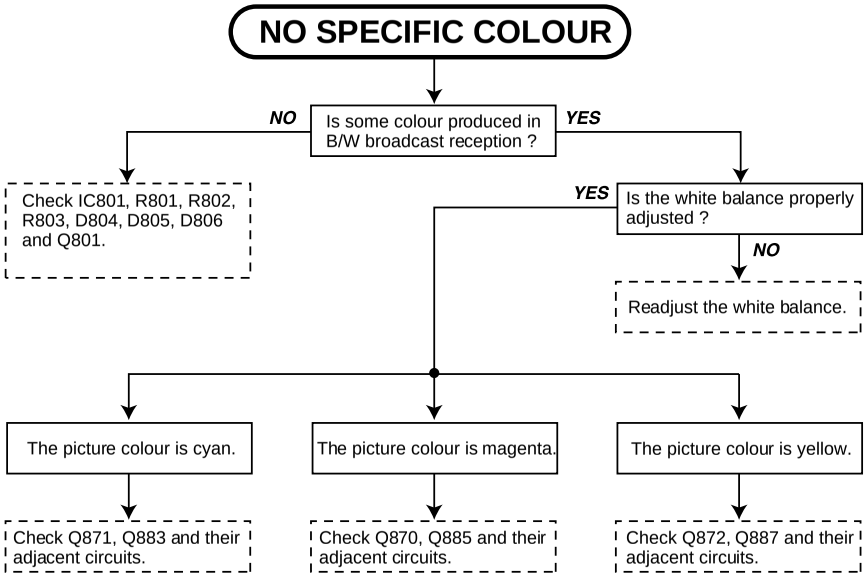


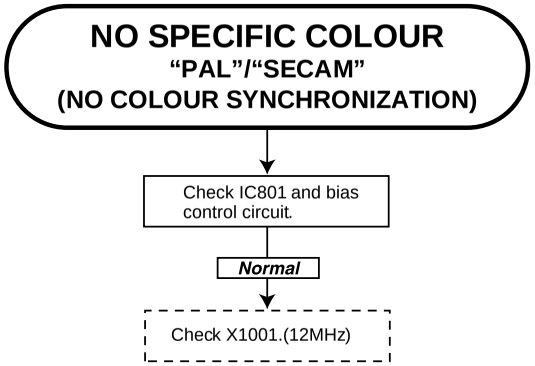

## TROUBLE SHOOTING TABLE (Continued)

**CIRCUIT TO BE CHECKED:**
- Sync. Separator Circuit.

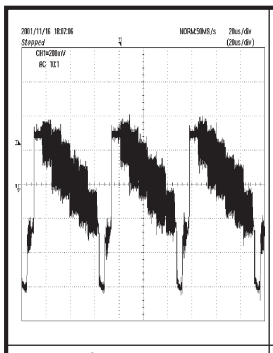
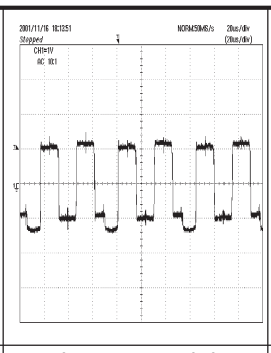
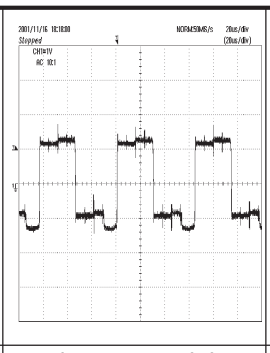
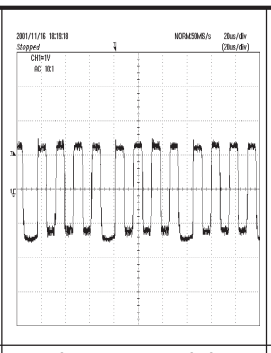
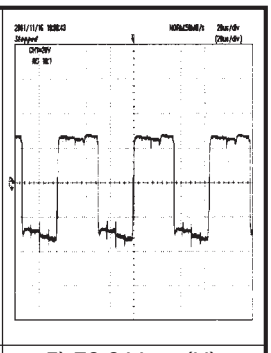
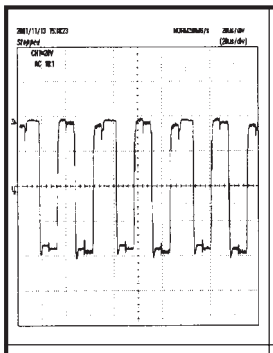
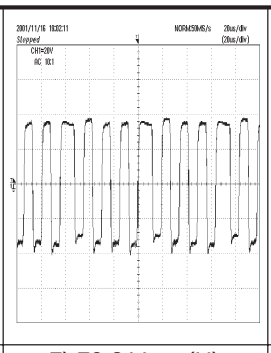
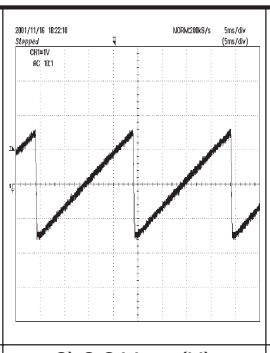
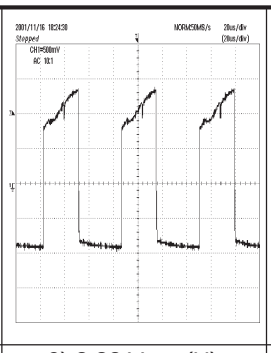
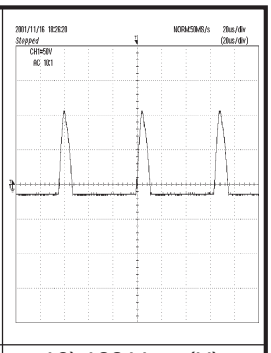
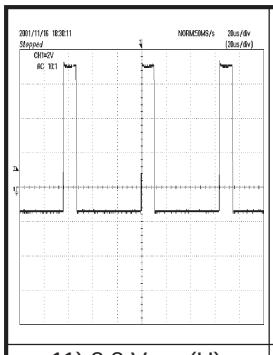
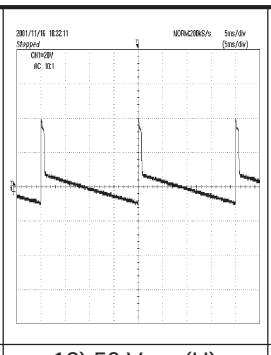
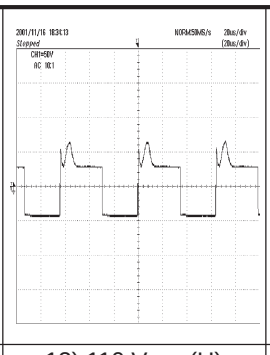
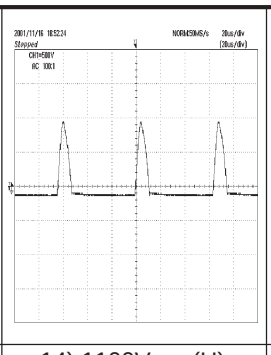
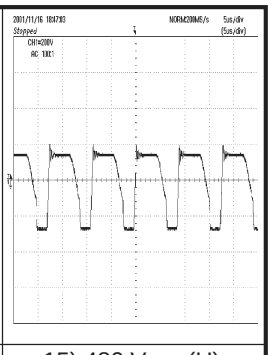
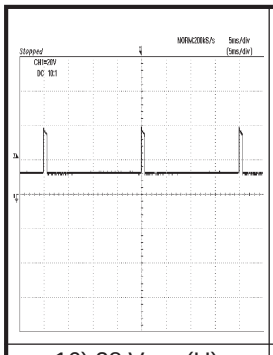
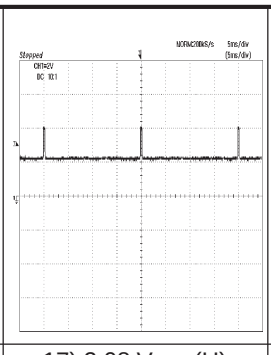


## TROUBLE SHOOTING TABLE (Continued)

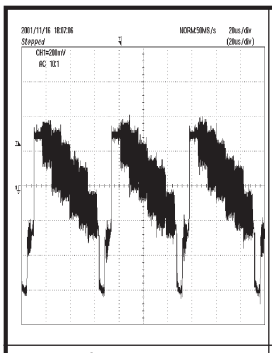


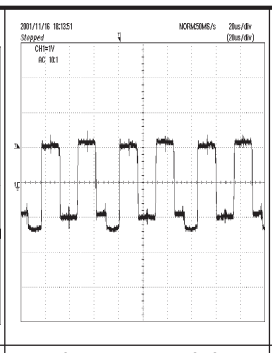
# WAVEFORMS(14D1-S/G/W)

| | | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| 1) 1.0 Vp-p | 2) 3.00 Vp-p (H) | 3) 3.10 Vp-p (H) | 4) 3.10 Vp-p (H) | 5) 70.0 Vp-p (H) |
|  |  |  |  |  |
| 6) 78.4 Vp-p (H) | 7) 79.2 Vp-p (H) | 8) 3.2 Vp-p (H) | 9) 2.32 Vp-p (H) | 10) 122 Vp-p (H) |
|  |  |  |  |  |
| 11) 8.8 Vp-p (H) | 12) 50 Vp-p (H) | 13) 110 Vp-p (H) | 14) 1100Vp-p (H) | 15) 480 Vp-p (H) |
|  |  | | | |
| 16) 28 Vp-p (H) | 17) 2.08 Vp-p (H) | | | |

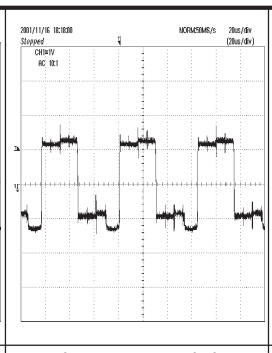
# WAVEFORMS(14D2-S/G)



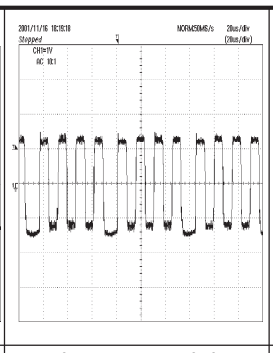
1) 1.0 Vp-p



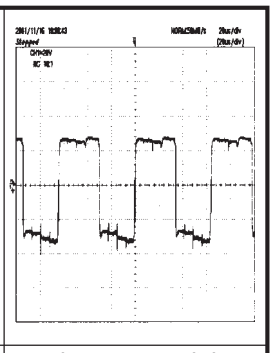
2) 3.00 Vp-p (H)



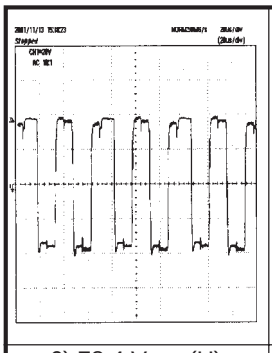
3) 3.10 Vp-p (H)



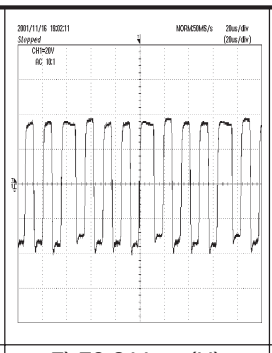
4) 3.10 Vp-p (H)



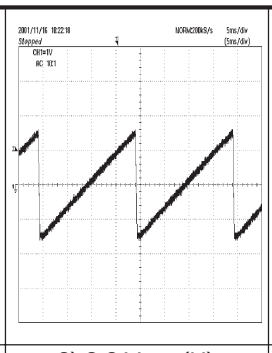
5) 70.0 Vp-p (H)



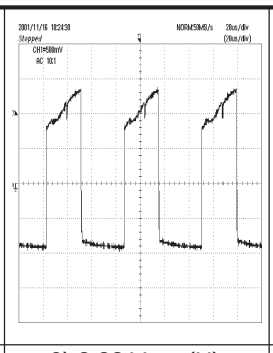
6) 78.4 Vp-p (H)



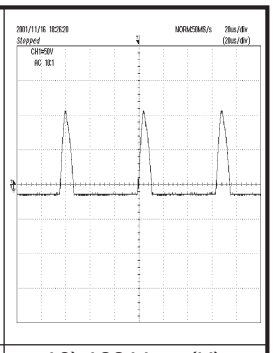
7) 79.2 Vp-p (H)



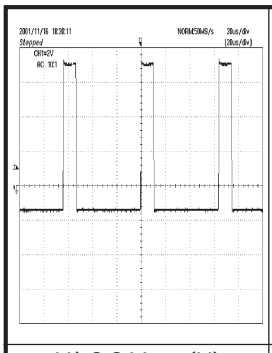
8) 3.2 Vp-p (H)



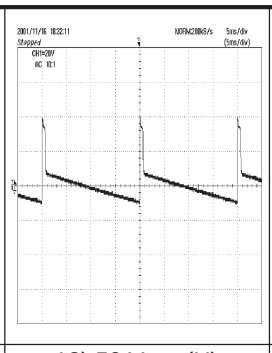
9) 2.32 Vp-p (H)



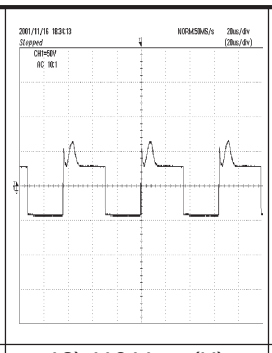
10) 122 Vp-p (H)



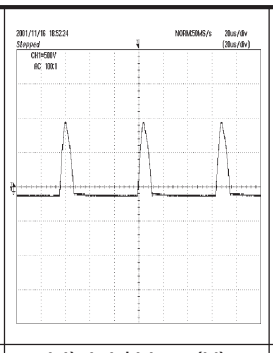
11) 8.8 Vp-p (H)



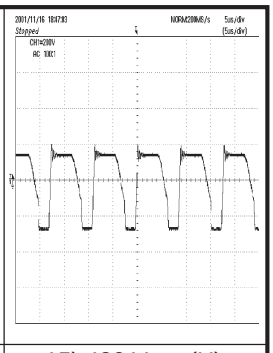
12) 50 Vp-p (H)



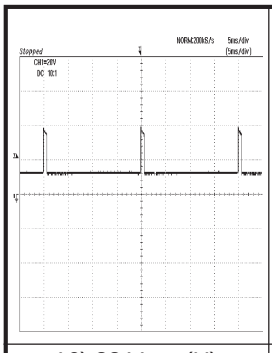
13) 110 Vp-p (H)



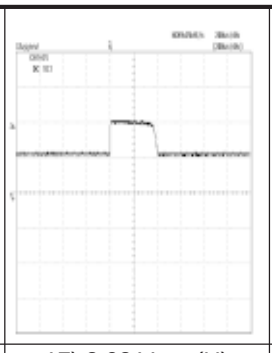
14) 1.1 kVp-p (H)



15) 480 Vp-p (H)



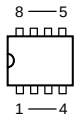
16) 28 Vp-p (H)



17) 2.08 Vp-p (H)

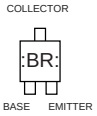
# SOLID STATE DEVICE BASE DIAGRAM

## TOP VIEW

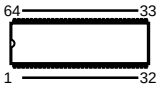



**CAT24W04**
**(BR24C04)**
**(M24C04W)**

**D601A**

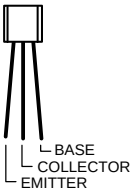



**B709A**

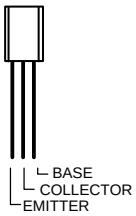



**IX3368CE**

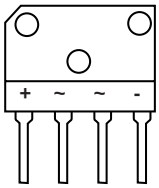
## SIDE VIEW



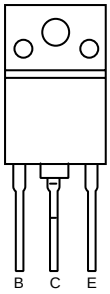

**TX0110BM**
**TX0124BM**
**2SC3198**



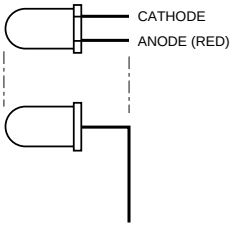

**2SC3207**



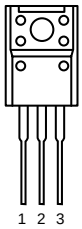

**DX0111PE**



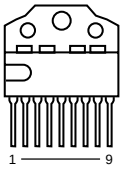

**2SD2586**



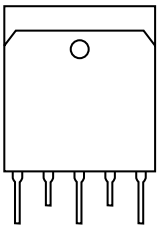

**PX0013PE**



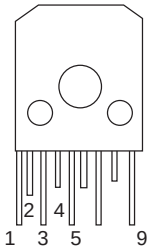

**KA7808A**




**AN7523**

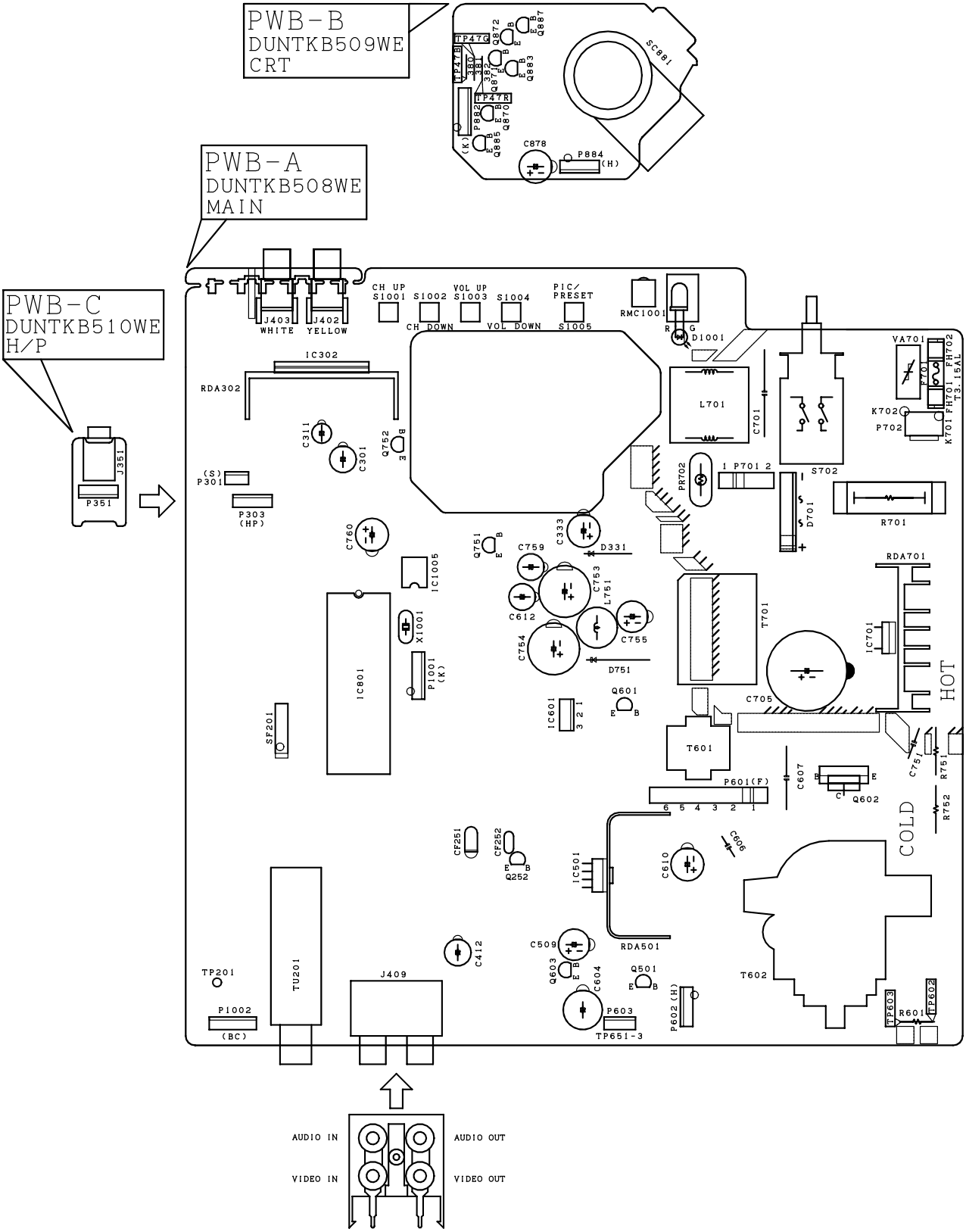


**STRG5653**

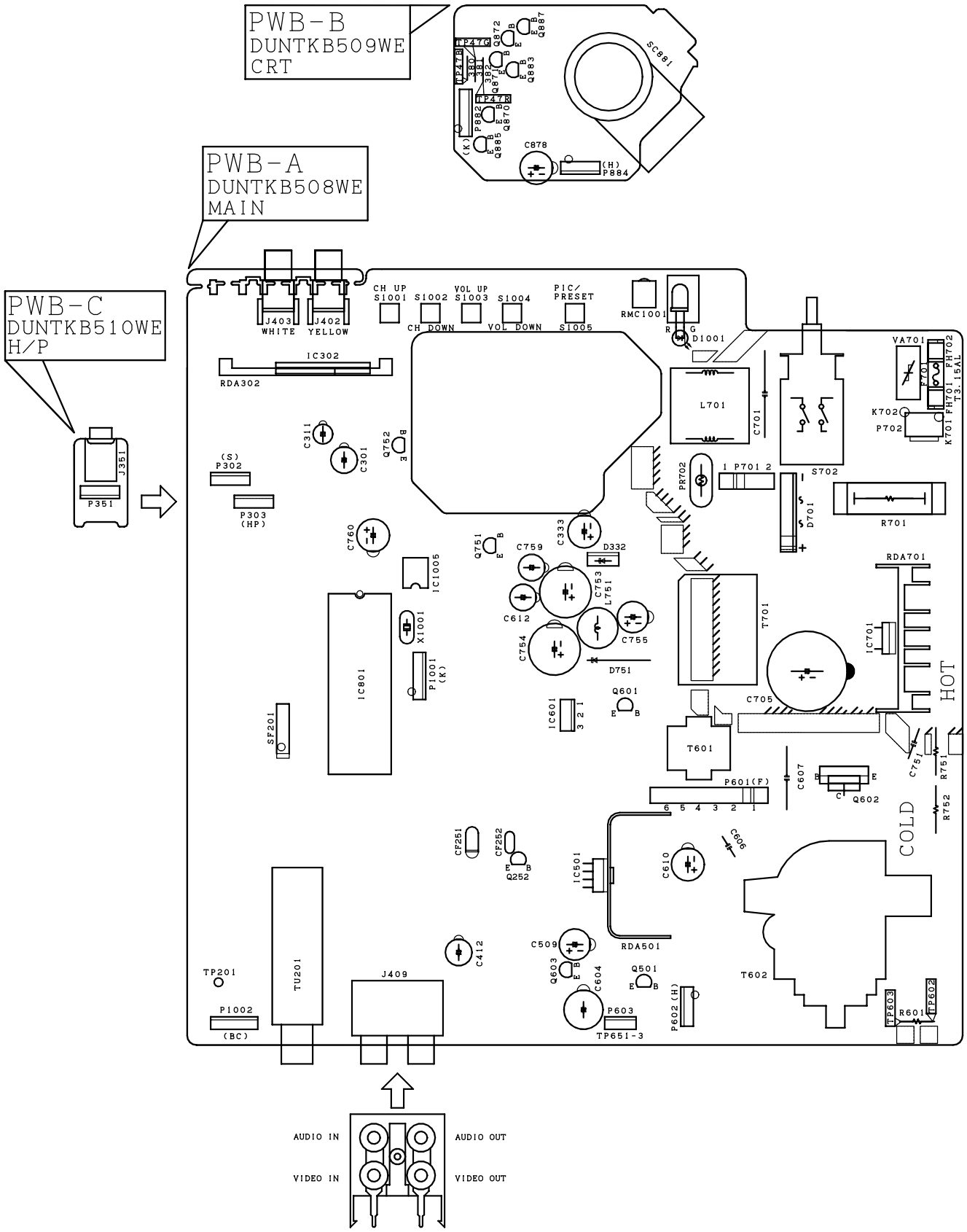



**AN5522**

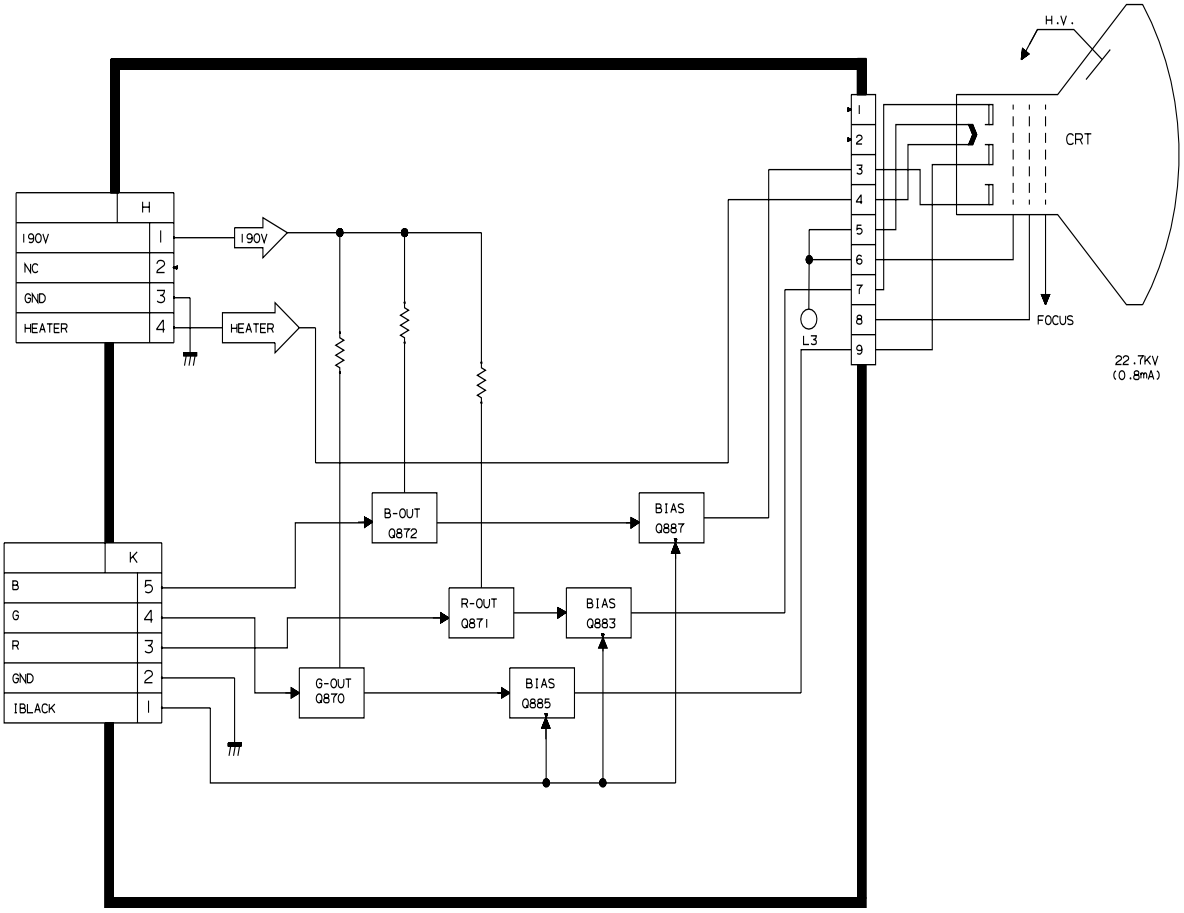
# MODEL 14D1-S/G/W CHASSIS LAYOUT



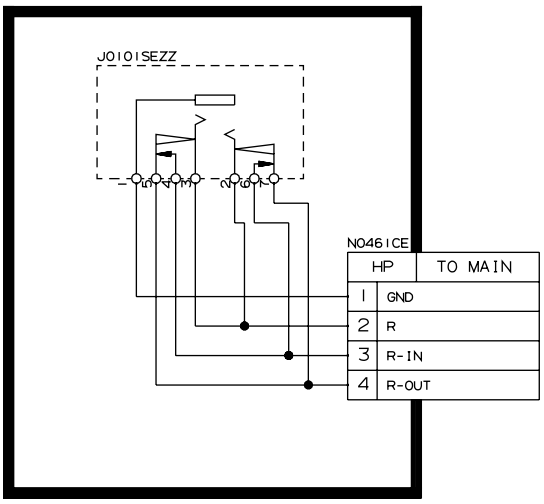
# MODEL 14D2-S/G CHASSIS LAYOUT



# BLOCK DIAGRAM:CRT UNIT

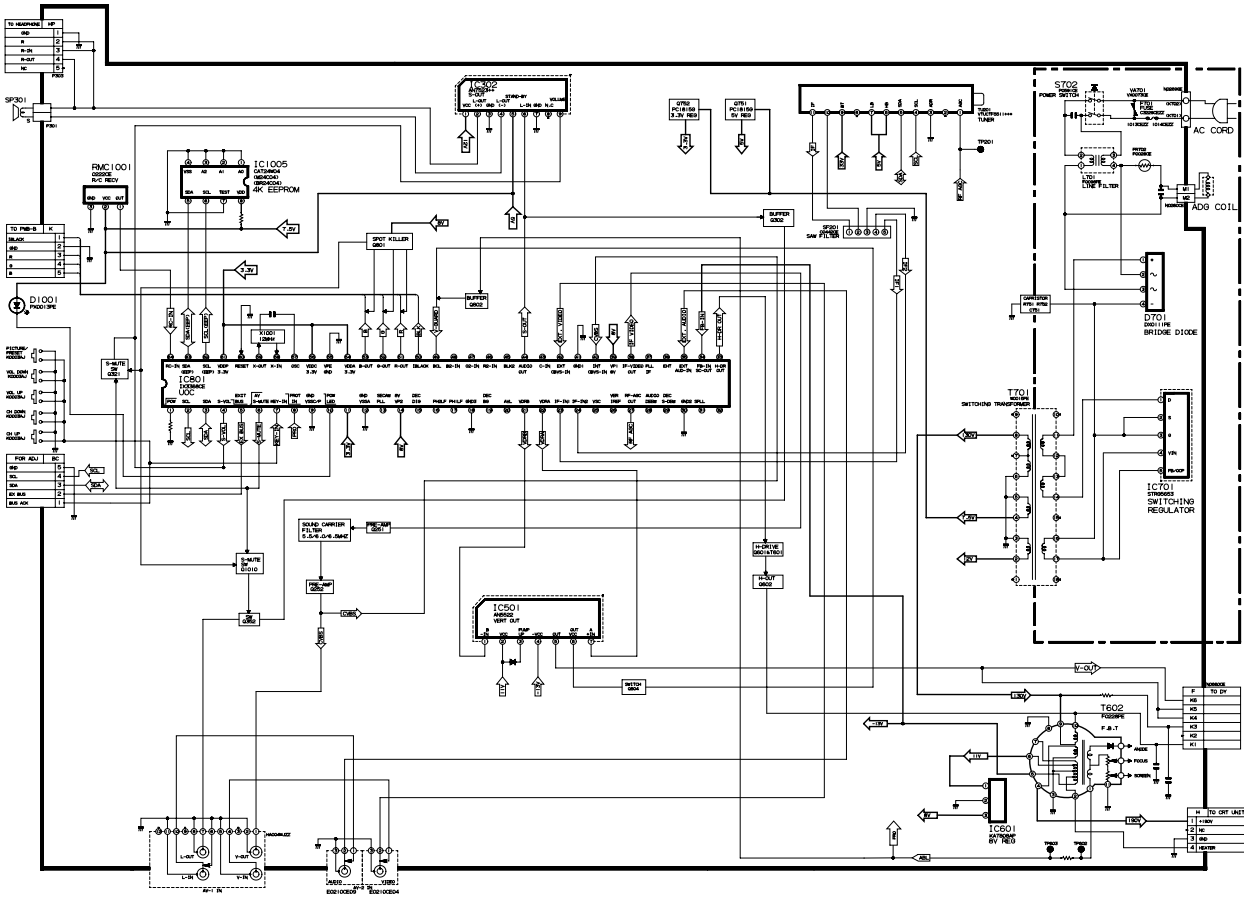



# BLOCK DIAGRAM:HEADPHONE UNIT



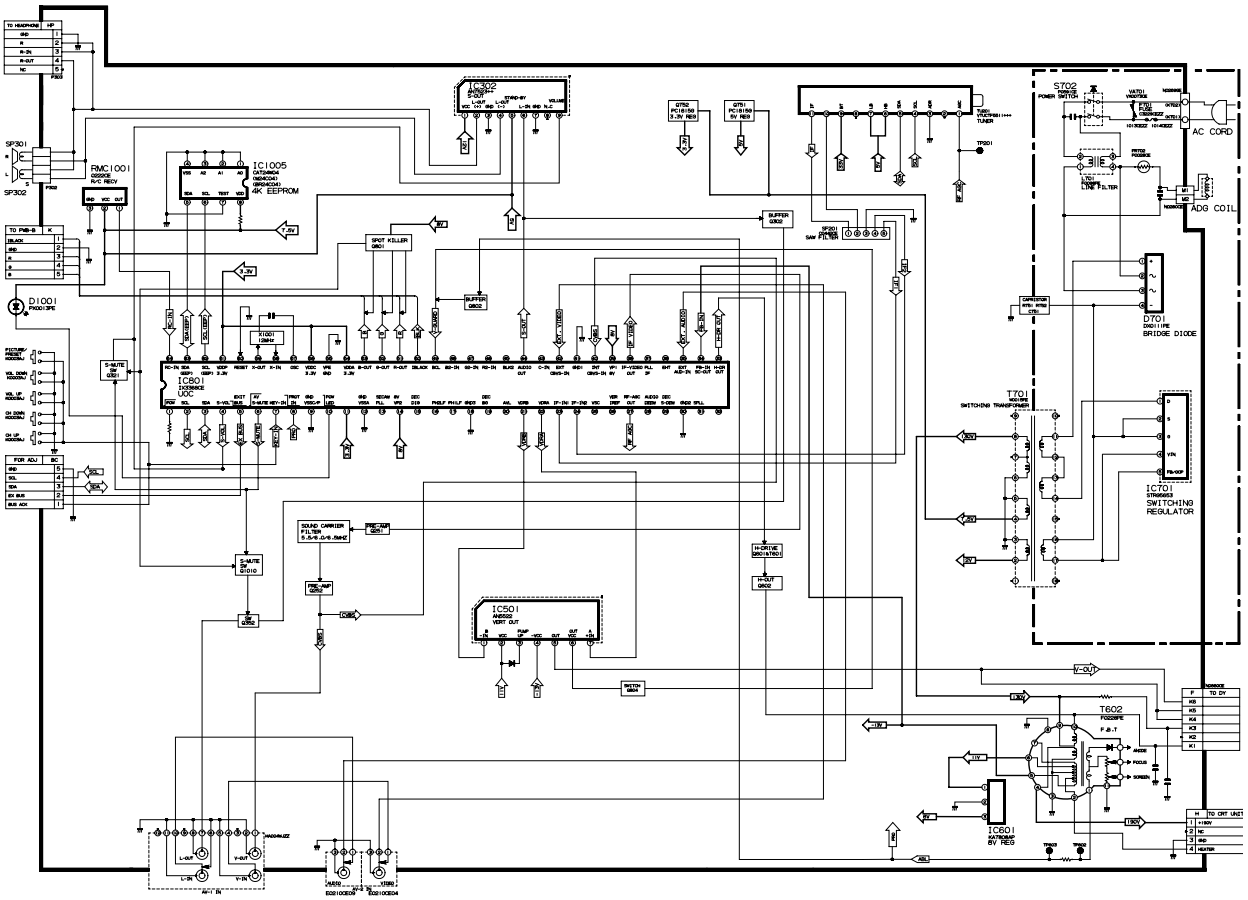
14D1-S/G/W
14D2-S/G

## MODEL 14D1-S/G/W BLOCK DIAGRAM:MAIN UNIT



14D1-S/G/W
14D2-S/G

## MODEL 14D2-S/G BLOCK DIAGRAM:MAIN UNIT



# DESCRIPTION OF SCHEMATIC DIAGRAM

### *SAFETY NOTES:*

1. *DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACING PARTS.*
2. *SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.*

### *IMPORTANT SAFETY NOTICE:*

*PARTS MARKED WITH "⚠ " ( ) ARE IMPOTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.*

### *SERVICE PRECAUTION:*

*THE AREA ENCLOSED BY THIS LINE ( —– - —– ) IS DIRECTLY CONNECTED WITH AC MAINS VOLTAGE.*
*WHEN SERVICING THE AREA, CONNECT AN ISOLATING TRANSFORMER BETWEEN TV RECEIVER AND AC LINE TO ELIMINATE HAZARD OF ELECTRIC SHOCK.*

### *NOTES:*

1. *The unit of resistance "ohm" is omitted. (K = 1000 ohms, M = Mega ohm).*
2. *All resistors are 1/10 watt, unless otherwise noted.*
3. *All capacitors are μF, unless otherwise noted. (P = μμF).*

### *VOLTAGE MEASUREMENT CONDITIONS:*

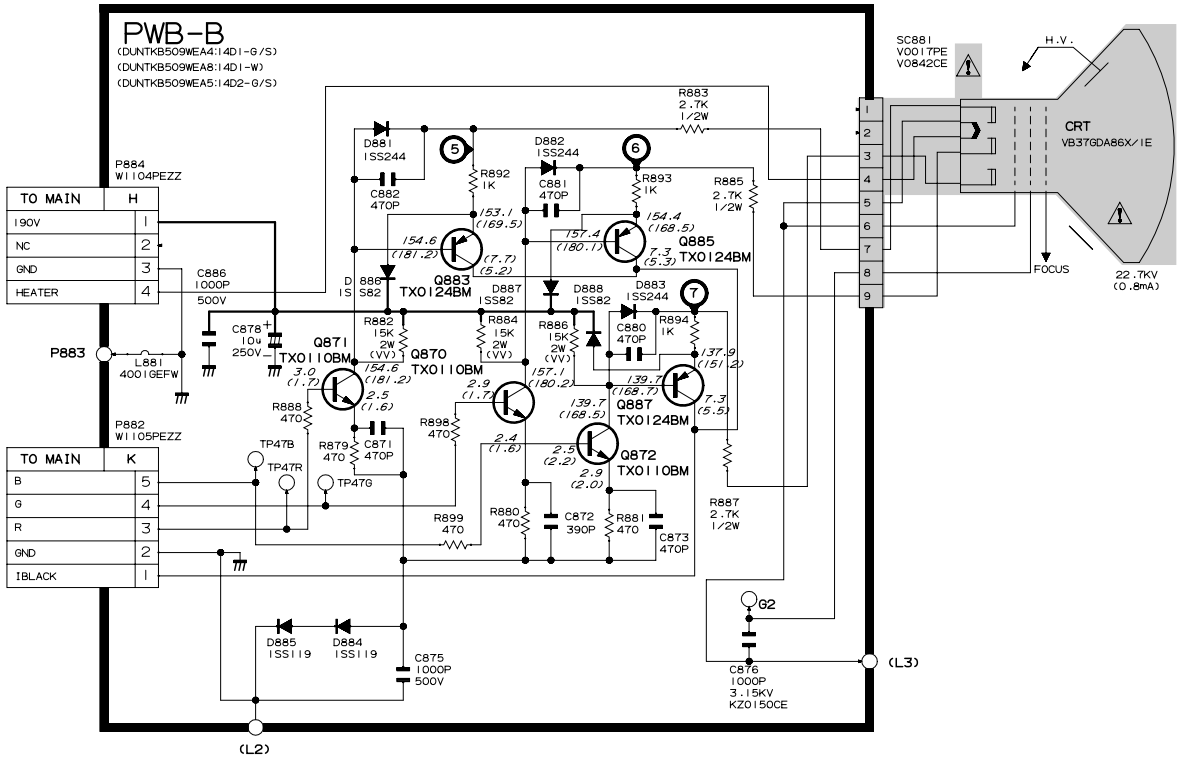
1. *Voltages in parenthesis measured with no signal.*
2. *Voltages without parenthesis measured with 3mV B & W or Colour signal.*
3. *All the voltages in each point are measured with VTVM.*

### *WAVEFORM MEASUREMENT CONDITIONS:*

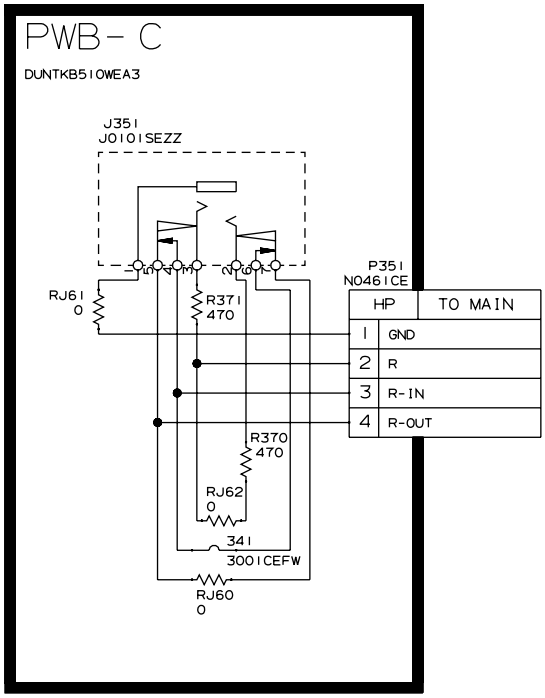
1. *The colour bar generator signal of 2.0V peak applied at of Base Video Buffer Amp. Q252.*
2. *Approximately 4V AGC bias .*

# SCHEMATIC DIAGRAM:CRT UNIT

| CRT | DY |
|---|---|
| VB37GDA86X/1E | RCILH0225PEZZ |
| VB370BVBK1S-S/1U-S | RCILH0220PEZZ |
| VB34JFQ90X/*S | RCILH0220PEZZ |
| VB34LRQ90X/*S | RCILH0220PEZZ |
| VB34KPU02X/*S | RCILH0226PEZZ |
| VB34JLL90X/*S | RCILH0221PEZZ |



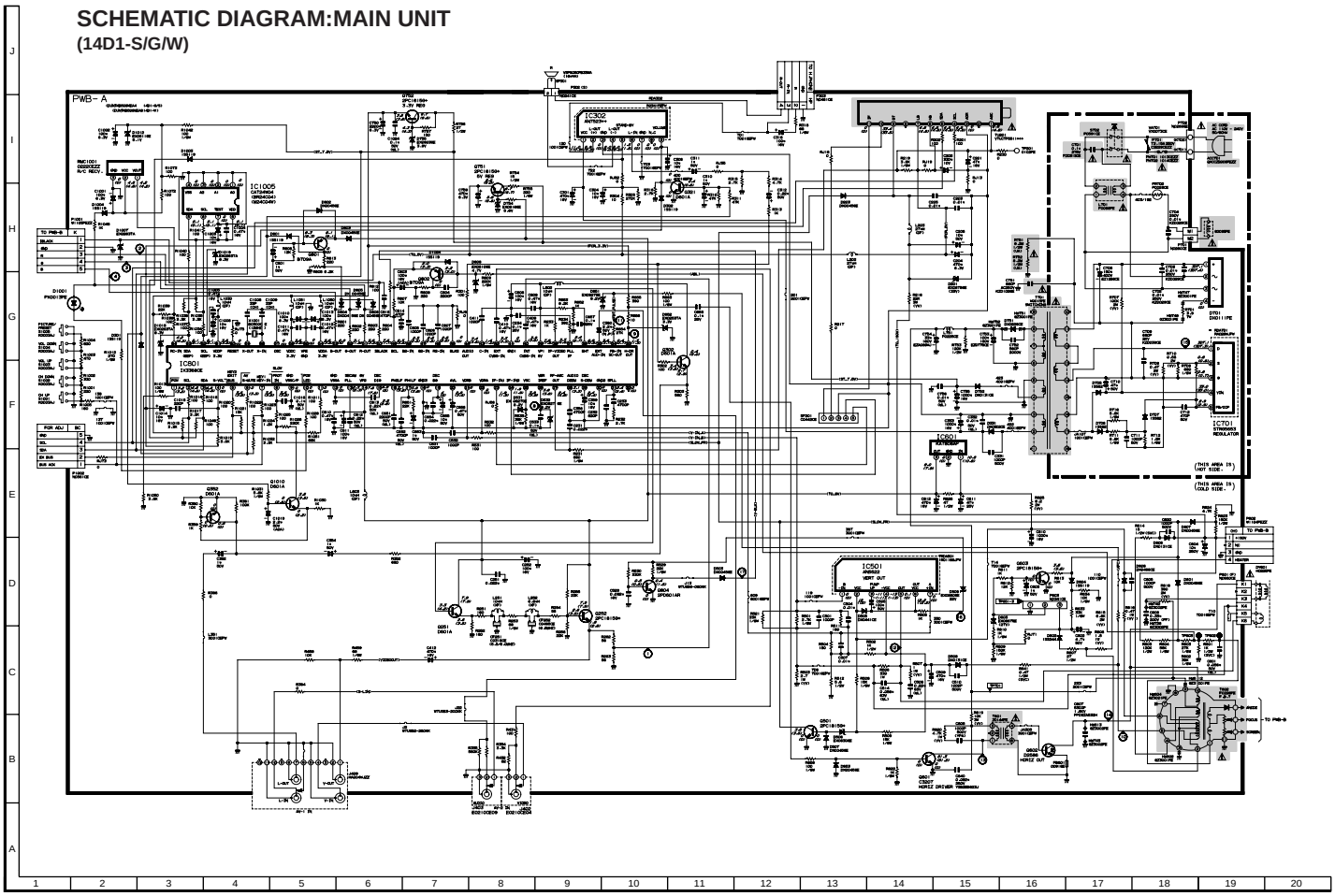

# SCHEMATIC DIAGRAM:HEADPHONE UNIT



14D1-S/G/W
14D2-S/G

# SCHEMATIC DIAGRAM:MAIN UNIT

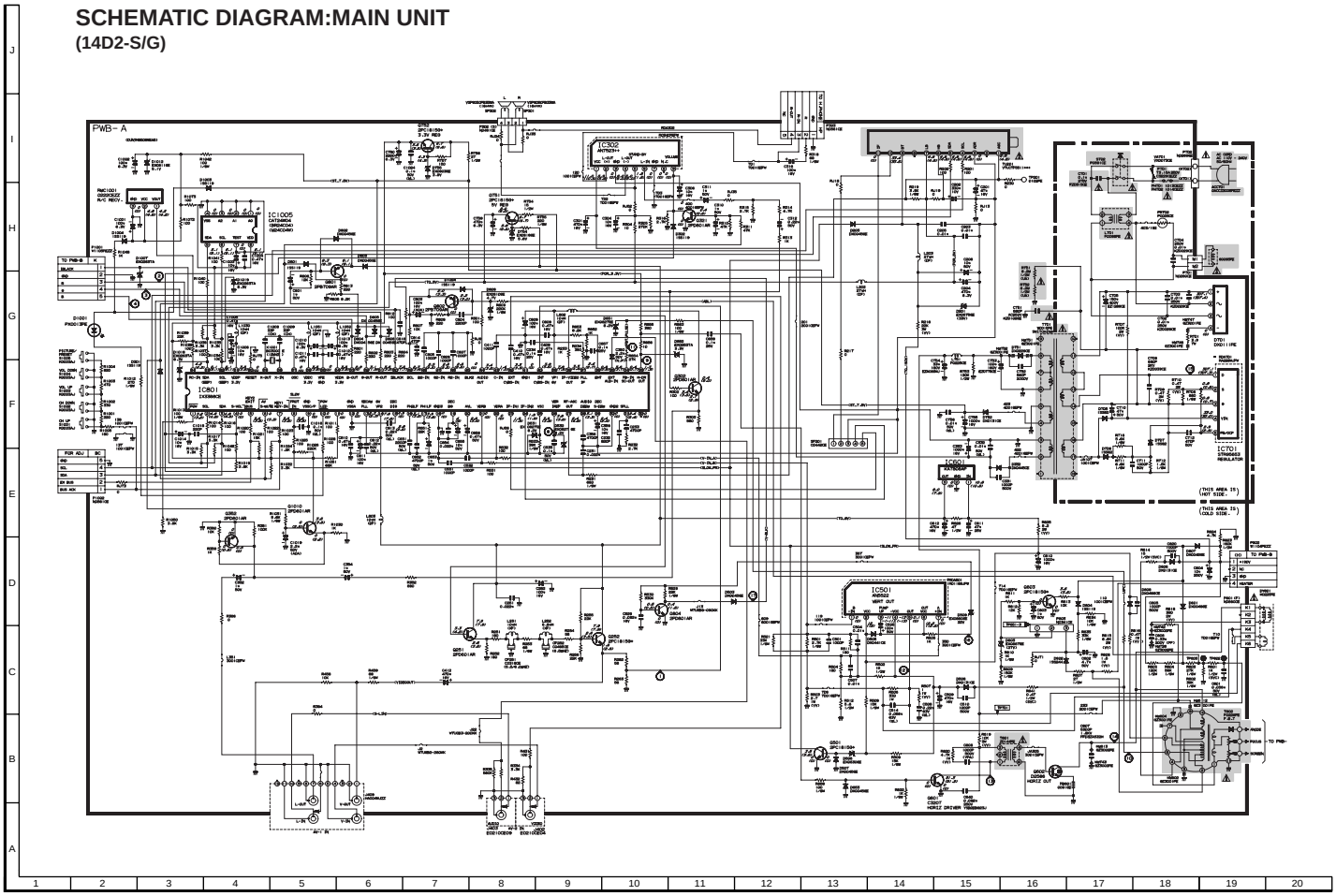
## (14D1-S/G/W)



14D1-S/G/W
14D2-S/G

# SCHEMATIC DIAGRAM:MAIN UNIT

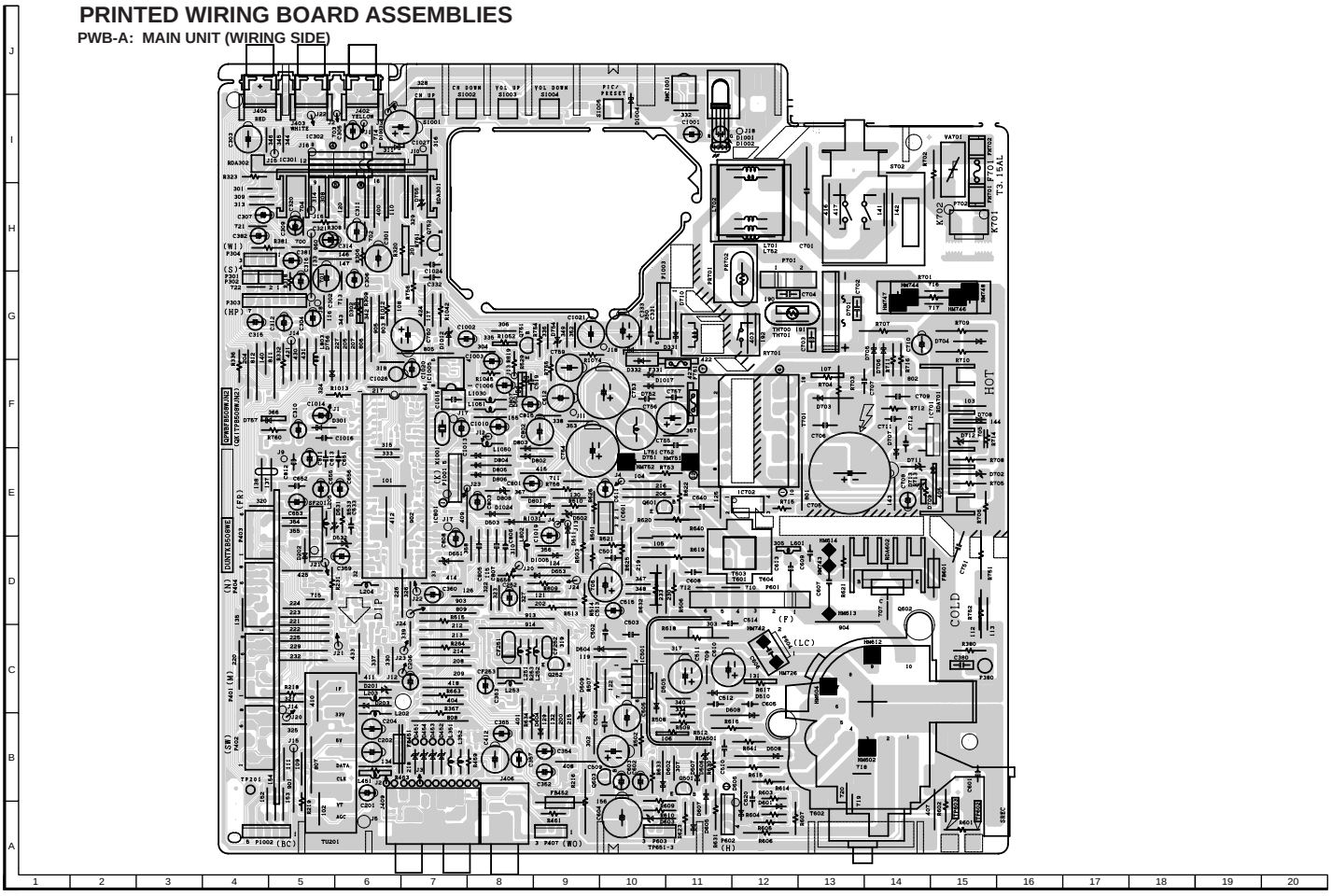
## (14D2-S/G)



14D1-S/G/W
14D2-S/G

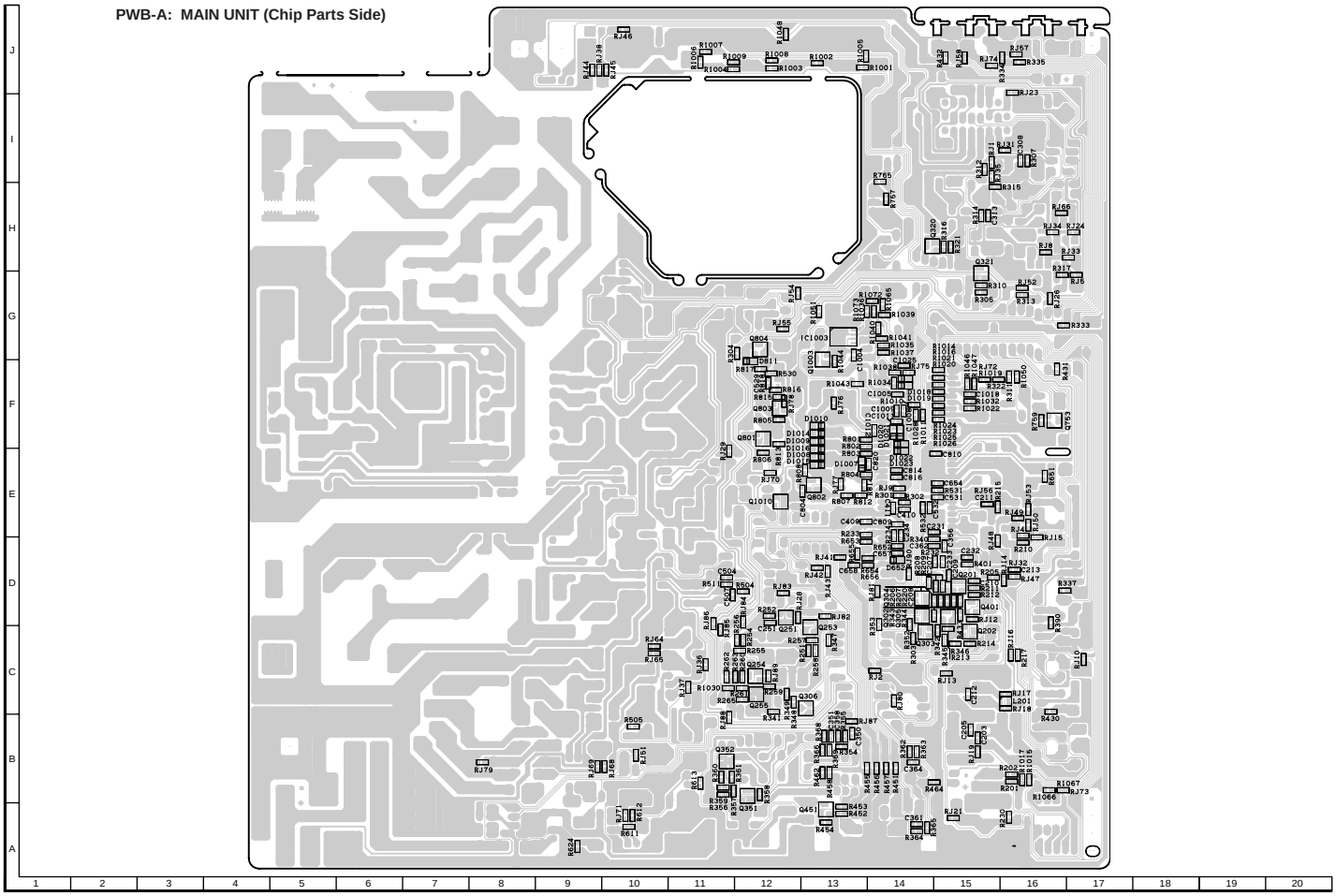
# PRINTED WIRING BOARD ASSEMBLIES

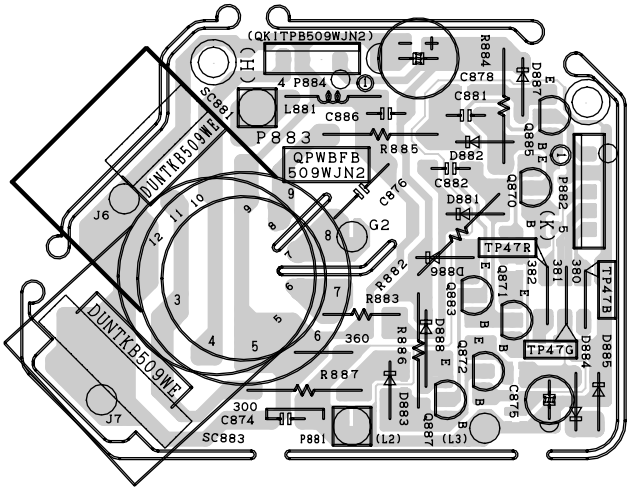
**PWB-A: MAIN UNIT (WIRING SIDE)**



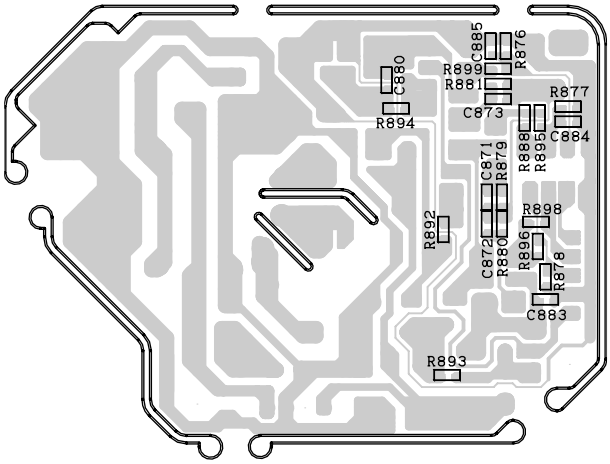
14D1-S/G/W
14D2-S/G

**PWB-A: MAIN UNIT (Chip Parts Side)**

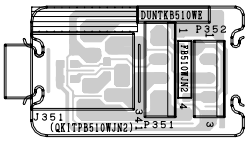




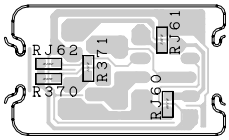

**PWB-B: CRT UNIT (WIRING SIDE)**




**PWB-B: CRT UNIT (Chip Parts Side)**




**PWB-C: HEADPHONE UNIT (WIRING SIDE)**




**PWB-B: HEADPHONE UNIT (Chip Parts Side)**

# REPLACEMENT PARTS LIST

## PARTS REPLACEMENT

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠" in the Replacement Parts Lists.
The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

### "HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. **MODEL NUMBER**
2. **REF. NO.**
3. **PART NO.**
4. **DESCRIPTION**

MARK ★ SPARE PARTS-DELIVERY SECTION.

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|
| **PICTURE TUBE** | | | | |
| ⚠ | VB37GDA86X/1E | R | Picture Tube | CB |
| ⚠ | RCiLG0095PEZZ | R | Degaussing Coil | AH |
| ⚠ DY601 | RCiLH0225PEZZ | R | Deflection Yoke | AX |
| | PMAGF3045CEZZ | R | Magnet | AG |
| | QEARC1422PEZZ | R | Ground-part | AD |

### PRINTED WIRING BOARD ASSEMBLIES
### *(NOT REPLACEMENT ITEM)*

| | | | | |
|---|---|---|---|---|
| PWB-A | DUNTKB508WEA4 | - | Main Unit (14D1-S/G) | — |
| PWB-A | DUNTKB508WEA5 | - | Main Unit (14D2-S/G) | — |
| PWB-A | DUNTKB508WEA8 | - | Main Unit (14D1-W) | — |
| PWB-B | DUNTKB509WEA4 | - | CRT Unit (14D1-S/G) | — |
| PWB-B | DUNTKB509WEA5 | - | CRT Unit (14D2-S/G) | — |
| PWB-B | DUNTKB509WEA8 | - | CRT Unit (14D1-W) | — |
| PWB-C | DUNTKB510WEA3 | - | Headphone Unit | — |

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|
| **DUNTKB508WEA4(14D1-S/G)<br>DUNTKB508WEA5(14D1-S/G)<br>DUNTKB508WEA8(14D1-W)<br>PWB-A MAIN UNIT** | | | | |
| **TUNER** | | | | |
| ⚠ TU201 | VTUCTF5511+++ | R | VHF Tuner | AZ |
| **INTEGRATED CIRCUITS** | | | | |
| IC302 | VHiAN7523++-1 | R | AN7523 | AH |
| ⚠ IC501 | VHiAN5522++-1 | R | AN5522 | AH |
| IC601 | VHiKA7808AP-1 | R | KIA7808API | AE |
| IC701 | VHiSTRG5653-1 | R | STR-G5653 | AQ |
| IC801 | RH-iX3368CEN6 | R | I.C. | BE |
| IC1005 | VHiCAT24W04-1 | R | I.C. | AE |
| **TRANSISTORS** | | | | |
| Q251 | VS2SD601A//-1Y | R | 2SD601A(14D1-S/G/W) | AC |
| Q251 | VS2PD601AR/-1Y | R | 2PD601AR(14D2-S/G) | AB |
| Q252 | VS2PC1815G+-1+ | R | 2PC1815G | AC |
| Q302 | VS2SD601A//-1Y | R | 2SD601A (14D1-S/G/W) | AC |
| Q302 | VS2PD601AR/-1Y | R | 2PD601AR (14D2-S/G) | AB |
| Q321 | VS2SD601A//-1Y | R | 2SD601A (14D1-S/G/W) | AC |
| Q321 | VS2PD601AR/-1Y | R | 2PD601AR (14D2-S/G) | AB |
| Q352 | VS2SD601A//-1Y | R | 2SD601A (14D1-S/G/W) | AC |
| Q352 | VS2PD601AR/-1Y | R | 2PD601AR (14D2-S/G) | AB |
| Q501 | VS2PC1815G+-1+ | R | 2PC1815G | AC |
| Q601 | VS2SC3207//-1+ | R | 2SC3207 | AC |
| Q602 | VS2SD2586//1E | R | 2SD2586 | AM |
| Q603 | VS2PC1815G+-1+ | R | 2PC1815G | AC |
| Q751 | VS2PC1815G+-1+ | R | 2PC1815G | AC |
| Q752 | VS2PC1815G+-1+ | R | 2PC1815G | AC |
| Q801 | VS2SB709A//-1Y | R | 2SB709A (14D1-S/G/W) | AA |
| Q801 | VS2PB709AR/-1Y | R | 2PB709AR (14D2-S/G) | AB |
| Q802 | VS2SB709A//-1Y | R | 2SB709A (14D1-S/G/W) | AA |
| Q802 | VS2PB709AR/-1Y | R | 2PB709AR (14D2-S/G) | AB |
| Q804 | VS2PD601AR/-1Y | R | 2PD601AR | AB |
| Q1010 | VS2SD601A//-1Y | R | 2SD601A (14D1-S/G/W) | AC |
| Q1010 | VS2PD601AR/-1Y | R | 2PD601AR (14D2-S/G) | AB |
| **DIODES AND LED'S** | | | | |
| D201 | RH-EX0676GEZZY | R | Zener Diode 32.5V | AA |
| D203 | RH-DX0045GEZZY | R | Diode | AA |
| D301 | VHD1SS119//-1Y | R | 1SS119 | AA |
| D302 | VHD1SS119//-1Y | R | 1SS119 | AA |
| D331 | RH-DX0302CEZZY | R | Diode (14D1-S/G/W) | AC |
| D332 | RH-DX0445CEZZ | R | Diode (14D2-S/G) | AL |
| D503 | RH-DX0045GEZZY | R | Diode | AA |
| D505 | RH-DX0441CEZZY | R | Diode | AC |
| D506 | RH-EX0630GEZZY | R | Zener Diode 9V | AA |
| D507 | RH-DX0045GEZZY | R | Diode | AA |
| D508 | RH-DX0131CEZZY | R | Diode | AC |
| D509 | RH-EX0660GEZZY | R | Zener Diode 22.2V | AB |
| D531 | RH-EX0627GEZZY | R | Zener Diode 8.2V | AA |
| D532 | RH-EX0627GEZZY | R | Zener Diode 8.2V | AA |
| D601 | RH-DX0048GEZZY | R | Diode | AA |
| D602 | VHD1SS244//-1Y | R | 1SS244 | AB |
| D603 | RH-EX0667GEZZY | R | Zener Diode 26.3V | AA |
| D604 | VHD1SS119//-1Y | R | 1SS119 | AA |
| D606 | RH-DX0131CEZZY | R | Diode | AC |
| D607 | RH-DX0045GEZZY | R | Diode | AA |
| D608 | RH-DX0468CEZZ | R | Diode | AE |
| D651 | RH-EX0627GEZZY | R | Zener Diode 8.2V | AA |
| D652 | RH-EX0253TAZZY | R | Zener Diode | AC |
| D653 | RH-DX0045GEZZY | R | Diode | AA |
| D701 | RH-DX0111PEZZ | R | Diode | AG |
| D705 | VHD1SS82///1AY | R | 1SS82 | AC |
| D706 | VHD1SS82///1AY | R | 1SS82 | AC |
| D707 | VHD1SS82///1AY | R | 1SS82 | AC |
| D751 | RH-DX0229CEZZ | R | Diode | AF |
| D752 | RH-DX0131CEZZY | R | Diode | AC |
| D754 | RH-EX0616GEZZY | R | Zener Diode 5.9V | AA |
| D755 | RH-EX0603GEZZY | R | Zener Diode 4V | AA |
| D801 | VHD1SS119//-1Y | R | 1SS119 | AA |

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|
| D802 | RH-DX0045GEZZY | R | Diode | AA |
| D803 | RH-DX0045GEZZY | R | Diode | AA |
| D804 | RH-DX0045GEZZY | R | Diode | AA |
| D805 | RH-DX0045GEZZY | R | Diode | AA |
| D806 | RH-DX0045GEZZY | R | Diode | AA |
| D808 | RH-EX0610GEZZY | R | Zener Diode 4.9V | AA |
| D1001 | RH-PX0013PEZZ | R | PhotoDiode | AC |
| D1003 | VHD1SS119//-1Y | R | 1SS119 | AA |
| D1004 | VHD1SS119//-1Y | R | 1SS119 | AA |
| D1007 | RH-EX0263TAZZY | R | Zener Diode | AC |
| D1012 | RH-EX0611GEZZY | R | Zener Diode 5V | AA |
| D1018 | RH-EX0263TAZZY | R | Zener Diode | AC |
| D1019 | RH-EX0263TAZZY | R | Zener Diode | AC |
| D1024 | VHD1SS119//-1Y | R | 1SS119 | AA |
| ⚠ VA701 | RH-VX0073CEZZ | R | Varistor | AD |

## PACKAGED CIRCUITS

| | | | | |
|---|---|---|---|---|
| PR702 | RMPTP0028CEZZ | R | Packaged Circuit | AG |
| X1001 | RCRSB0300CEZZ | R | Crystal | AF |

## COILS AND TRANSFORMER

| | | | | |
|---|---|---|---|---|
| CF251 | RFiLC0318CEZZ | R | Filter | AG |
| CF252 | RFiLC0465CEZZ | R | Filter | AD |
| L202 | VP-DF270K0000Y | R | Peaking 27µH | AB |
| L203 | VP-DF270K0000Y | R | Peaking 27µH | AB |
| L251 | VP-XF100K0000Y | R | Peaking 10µH | AB |
| L252 | VP-XF6R8K0000Y | R | Peaking 6.8µH | AB |
| ⚠ L701 | RCiLF0096PEZZ | R | Coil | AF |
| L751 | RCiLP0225CEZZ | R | Coil | AF |
| L802 | VP-DF100K0000Y | R | Peaking 10µH | AB |
| L803 | VP-DF100K0000Y | R | Peaking 10µH | AB |
| L1030 | VP-DF100K0000Y | R | Peaking 10µH | AB |
| L1050 | VP-DF100K0000Y | R | Peaking 10µH | AB |
| L1051 | VP-DF100K0000Y | R | Peaking 10µH | AB |
| SF201 | RFiLC0442CEZZ | R | Filter | AL |
| ⚠ T601 | RTRNZ0144PEZZ | R | Transformer | AE |
| ⚠ T602 | RTRNF0228PEZZ | R | H-Volt Transformer | AX |
| ⚠ T701 | RTRNW0015PEZZ | R | Transformer | AL |

## CAPACITORS

| | | | | | | |
|---|---|---|---|---|---|---|
| C201 | VCEA0A1CW476M+ | R | 47 | 16V | Electrolytic | AB |
| C202 | VCEA0A1AW337M+ | R | 330 | 10V | Electrolytic | AC |
| C203 | VCKYCY1HF103Z | R | 0.01 | 50V | Ceramic | AA |
| C204 | VCEA0A0JW477M+ | R | 470 | 6.3V | Electrolytic | AC |
| C205 | VCKYCY1HF103Z | R | 0.01 | 50V | Ceramic | AA |
| C206 | VCEA0A1HW106M+ | R | 10 | 50V | Electrolytic | AB |
| C231 | VCKYCY1HF223Z | R | 0.022 | 50V | Ceramic | AB |
| C232 | VCKYCY1HB821K | R | 820p | 50V | Ceramic | AA |
| C233 | VCKYCY1HB472K | R | 4700p | 50V | Ceramic | AA |
| C234 | VCKYCY1EF104Z | R | 0.1 | 25V | Ceramic | AA |
| C251 | VCKYCY1HF223Z | R | 0.022 | 50V | Ceramic | AB |
| C252 | VCEA0A1CW107M+ | R | 100 | 16V | Electrolytic | AC |
| C301 | VCEA0A1CW477M+ | R | 470 | 16V | Electrolytic | AC |
| C304 | VCEA0A1CW106M+ | R | 10 | 16V | Electrolytic | AB |
| C306 | VCEA0A1CW106M+ | R | 10 | 16V | Electrolytic | AB |
| C310 | VCEA0A1HW105M+ | R | 1 | 50V | Electrolytic | AB |
| C311 | VCEA0A1HW105M+ | R | 1 | 50V | Electrolytic | AB |
| C312 | VCEA0A1HW224M+ | R | 0.22 | 50V | Electrolytic | AB |
| C316 | VCEA0A1CW107M+ | R | 100 | 16V | Electrolytic | AC |
| C331 | VCKYPA2HB102K+ | R | 1000p | 500V | Ceramic | AA |
| C332 | RC-QZA103TAYJ+ | R | 0.01 | 50V | M.Polyester Film | AB |
| C333 | VCEA0A1CW108M | R | 1000 | 16V | Electrolytic | AD |
| C352 | VCEA0A1HW105M+ | R | 1 | 50V | Electrolytic | AB |
| C354 | VCEA0A1HW105M+ | R | 1 | 50V | Electrolytic | AB |
| C356 | VCKYCY1HB472K | R | 4700p | 50V | Ceramic | AA |
| C359 | VCEA0A1CW106M+ | R | 10 | 16V | Electrolytic | AB |
| C360 | VCE9GA1HW225M+ | R | 2.2 | 50V | Elect.(N,P) | AB |
| C409 | VCKYCY1CF474Z | R | 0.47 | 16V | Ceramic | AB |
| C410 | VCKYCY1CF474Z | R | 0.47 | 16V | Ceramic | AB |
| C411 | VCKYCY1HB102K | R | 1000p | 50V | Ceramic | AA |
| C412 | VCEA0A1CW477M+ | R | 470 | 16V | Electrolytic | AC |
| C501 | VCKYPA1HB102K+ | R | 1000p | 50V | Ceramic | AA |
| C504 | VCKYCY1HB103K | R | 0.01 | 50V | Ceramic | AA |
| C505 | VCEA0A1HW107M+ | R | 100 | 50V | Electrolytic | AB |
| C507 | VCKYCY1HB103K | R | 0.01 | 50V | Ceramic | AA |
| C508 | VCFYSA1JB224J+ | R | 0.22 | 63V | Mylar | AD |
| C509 | VCEA0A1CW477M+ | R | 470 | 16V | Electrolytic | AC |
| C510 | VCKYPA2HB102K+ | R | 1000p | 500V | Ceramic | AA |
| C514 | VCFYSA1JB563J+ | R | 0.056 | 63V | Mylar | AD |
| C529 | VCKYCY1CB823KY | R | 0.082 | 16V | Ceramic | AH |
| C531 | VCKYCY1HB102K | R | 1000p | 50V | Ceramic | AA |
| C532 | VCKYCY1HB102K | R | 1000p | 50V | Ceramic | AA |
| C533 | RC-QZA104TAYJ+ | R | 0.1 | 50V | M.Polyester Film | AB |
| C601 | RC-QZA563TAYJ+ | R | 0.056 | 50V | M.Polyester Film | AB |
| C602 | VCEA0A1HW475M+ | R | 4.7 | 50V | Electrolytic | AB |
| C603 | VCEA0A1HW105M+ | R | 1 | 50V | Electrolytic | AB |
| C604 | VCEA0A2EW106M | R | 10 | 250V | Electrolytic | AD |
| C605 | VCKYPA2HB102K+ | R | 1000p | 500V | Ceramic | AA |
| C606 | VCFPFA2EB334J | R | 0.33 | 250V | M.Polypro | AD |
| C607 | VCFPFD3ZA532H | R | 5300p | 1.8kV | M.Polypro | AD |
| C608 | VCKYPA2HB102K+ | R | 1000p | 500V | Ceramic | AA |
| C610 | VCEA0A1CW108M | R | 1000 | 16V | Electrolytic | AD |
| C611 | VCEA0A1EW476M+ | R | 47 | 25V | Electrolytic | AB |
| C612 | VCEA0A1CW477M+ | R | 470 | 16V | Electrolytic | AC |
| C620 | VCKYPA2HB102K+ | R | 1000p | 500V | Ceramic | AA |
| C640 | VCFYSB2EB823J | R | 0.082 | 250V | M.Polyester Film | AD |
| C651 | VCQYTA1HM222J+ | R | 2200p | 50V | Mylar | AA |
| C652 | RC-QZA472TAYJ+ | R | 4700p | 50V | Mylar | AB |
| C653 | VCEA0A1HW105M+ | R | 1 | 50V | Electrolytic | AB |
| C654 | VCKYCY1HF223Z | R | 0.022 | 50V | Ceramic | AB |
| C655 | VCEA0A1HW106M+ | R | 10 | 50V | Electrolytic | AB |
| C656 | VCEA0A1HW474M+ | R | 0.47 | 50V | Electrolytic | AB |
| C657 | VCKYCY1EF104Z | R | 0.1 | 25V | Ceramic | AA |
| C658 | VCKYCY1EF104Z | R | 0.1 | 25V | Ceramic | AA |
| ⚠ C701 | RC-FZ031SCEZZ | R | 0.1 | 275V | M.Polyester Film | AD |
| C702 | RC-KZ0029CEZZ+ | R | 0.01 | 250V | Ceramic | AC |
| C703 | RC-KZ0029CEZZ+ | R | 0.01 | 250V | Ceramic | AC |
| C704 | RC-KZ0029CEZZ+ | R | 0.01 | 250V | Ceramic | AC |
| C705 | RC-EZ1286CEZZ | R | 150 | 400V | Electrolytic | AT |
| C709 | RC-KZ0039CEZZ | R | 680p | 2kV | Ceramic | AB |
| C710 | VCEA0A1HW476M+ | R | 47 | 50V | Electrolytic | AB |
| C711 | VCKYPA1HB102K+ | R | 1000p | 50V | Ceramic | AA |
| C712 | VCKYPA1HB471K+ | R | 470p | 50V | Ceramic | AA |
| ⚠ C751 | RC-KZ0102GEZZ | R | 680 | AC250V | Ceramic | AE |
| C752 | VCKYPH3DB561K | R | 560p | 2kV | Ceramic | AC |
| C753 | RC-EZ0776CEZZ | R | 100 | 160V | Electrolytic | AF |
| C754 | RC-EZA069WJZZ | R | 33 | 160V | Electrolytic | AE |
| C755 | VCEA0A1CW108M | R | 1000 | 16V | Electrolytic | AD |
| C756 | RC-QZA103TAYJ+ | R | 0.01 | 50V | M.Polyester Film | AB |
| C759 | VCEA0A0JW477M+ | R | 470 | 6.3V | Electrolytic | AC |
| C760 | VCEA0A0JW228M | R | 2200 | 6.3V | Electrolytic | AD |
| C801 | VCEA0A1HW105M+ | R | 1 | 50V | Electrolytic | AB |
| C803 | VCEA0A1CW107M+ | R | 100 | 16V | Electrolytic | AC |
| C804 | VCKYCY1HB222K | R | 2200p | 50V | Ceramic | AA |
| C805 | VCKYD41HB102KY | R | 1000p | 50V | Ceramic | AA |
| C806 | VCKYD41HB102KY | R | 1000p | 50V | Ceramic | AA |
| C807 | VCKYD41HB102KY | R | 1000p | 50V | Ceramic | AA |
| C808 | VCEA0A1CW107M+ | R | 100 | 16V | Electrolytic | AC |
| C809 | VCKYCY1CF474Z | R | 0.47 | 16V | Ceramic | AB |
| C810 | VCKYCY1CF474Z | R | 0.47 | 16V | Ceramic | AB |
| C811 | VCEA0A1CW107M+ | R | 100 | 16V | Electrolytic | AC |
| C812 | VCFYFA1HA224J+ | R | 0.22 | 50V | M.Polyester Film | AB |
| C813 | VCFYFA1HA224J+ | R | 0.22 | 50V | M.Polyester Film | AB |
| C814 | VCKYCY1HB471K | R | 470p | 50V | Ceramic | AA |
| C816 | VCKYCY1HB471K | R | 470p | 50V | Ceramic | AA |
| C1001 | VCEA0A0JW107M+ | R | 100 | 6.3V | Electrolytic | AB |
| C1002 | VCEA0A0JW107M+ | R | 100 | 6.3V | Electrolytic | AB |
| C1003 | VCEA0A1CW106M+ | R | 10 | 16V | Electrolytic | AB |
| C1004 | VCKYCY1CF474Z | R | 0.47 | 16V | Ceramic | AB |
| C1005 | VCKYCY1CF474Z | R | 0.47 | 16V | Ceramic | AB |
| C1006 | VCEA0A1CW106M+ | R | 10 | 16V | Electrolytic | AB |
| C1008 | VCCCCY1HH330J | R | 33p | 50V | Ceramic | AA |
| C1009 | VCCCCY1HH330J | R | 33p | 50V | Ceramic | AA |
| C1010 | VCEA0A0JW107M+ | R | 100 | 6.3V | Electrolytic | AB |
| C1011 | VCKYCY1CF474Z | R | 0.47 | 16V | Ceramic | AB |
| C1012 | VCKYCY1CF474Z | R | 0.47 | 16V | Ceramic | AB |
| C1013 | VCEA0A0JW107M+ | R | 100 | 6.3V | Electrolytic | AB |
| C1014 | VCEA0A1CW106M+ | R | 10 | 16V | Electrolytic | AB |
| C1016 | RC-QZA104TAYJ+ | R | 0.1 | 50V | Mylar | AB |
| C1018 | VCKYCY1HB221K | R | 220p | 50V | Ceramic | AA |
| C1019 | VCEA0A1HW225M+ | R | 2.2 | 50V | Electrolytic | AB |
| C1024 | RC-QZA104TAYJ+ | R | 0.1 | 50V | Mylar | AB |

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|
| | | | **RESISTORS** | |
| RJ2 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ9 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ13 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ14 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ15 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ16 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ17 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ18 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ19 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ24 | VRN-MD2AL000J | R | 0 1/10W Metal Film (14D2-S/G) | AA |
| RJ26 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ28 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ32 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ33 | VRN-MD2AL000J | R | 0 1/10W Metal Film (14D2-S/G) | AA |
| RJ35 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ37 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ38 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ41 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ42 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ43 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ46 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ47 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ49 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ50 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ51 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ52 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ53 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ56 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ71 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ73 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ75 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ76 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ77 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ78 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ83 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ88 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| R217 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| R230 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| R364 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| R366 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ10 | VRS-CY1JF000JY | R | 0 1/16W Metal Oxide | AA |
| RJ21 | VRS-CY1JF000JY | R | 0 1/16W Metal Oxide | AA |
| R201 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R202 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R216 | VRS-VV3LB223J | R | 22k 3W Metal Oxide | AB |
| R219 | VRD-RA2BE392JY | R | 3.9k 1/8W Carbon | AA |
| R231 | VRD-RA2BE681JY | R | 680 1/8W Carbon | AA |
| R232 | VRN-MD2AL272J | R | 2.7k 1/10W Metal Film | AA |
| R233 | VRN-MD2AL102J | R | 1k 1/10W Metal Film | AA |
| R234 | VRN-MD2AL391J | R | 390 1/10W Metal Film | AA |
| R251 | VRN-MD2AL181J | R | 180 1/10W Metal Film | AA |
| R252 | VRN-MD2AL181J | R | 180 1/10W Metal Film | AA |
| R253 | VRD-RA2BE680JY | R | 68 1/8W Carbon | AA |
| R254 | VRN-MD2AL560J | R | 56 1/10W Metal Film | AB |
| R255 | VRN-MD2AL223J | R | 22k 1/10W Metal Film | AA |
| R256 | VRN-MD2AL223J | R | 22k 1/10W Metal Film | AA |
| R262 | VRN-MD2AL560J | R | 56 1/10W Metal Film | AB |
| R263 | VRN-MD2AL560J | R | 56 1/10W Metal Film | AB |
| R301 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R302 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R303 | VRN-MD2AL561J | R | 560 1/10W Metal Film | AA |
| R304 | VRN-MD2AL100J | R | 10 1/10W Metal Film | AA |
| R305 | VRN-MD2AL274J | R | 270k 1/10W Metal Film | AA |
| R310 | VRN-MD2AL473J | R | 47k 1/10W Metal Film | AA |
| R311 | VRN-MD2AL473J | R | 47k 1/10W Metal Film | AA |
| R313 | VRN-MD2AL102J | R | 1k 1/10W Metal Film | AA |
| R314 | VRN-MD2AL472J | R | 4.7k 1/10W Metal Film | AA |
| R315 | VRN-MD2AL272J | R | 2.7k 1/10W Metal Film | AA |
| R316 | VRN-MD2AL272J | R | 2.7k 1/10W Metal Film | AA |
| R318 | VRD-RA2BE680JY | R | 68 1/8W Carbon | AA |
| R334 | VRN-MD2AL332J | R | 3.3k 1/10W Metal Film | AA |
| R335 | VRS-CY1JF564JY | R | 560k 1/16W Metal Oxide | AA |
| R352 | VRN-MD2AL681J | R | 680 1/10W Metal Film | AA |
| R359 | VRN-MD2AL102J | R | 1k 1/10W Metal Film | AA |
| R360 | VRN-MD2AL103J | R | 10k 1/10W Metal Film | AA |
| R361 | VRN-MD2AL104J | R | 100k 1/10W Metal Film | AA |
| R431 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R432 | VRN-MD2AL820J | R | 82 1/10W Metal Film | AA |
| R458 | VRN-MD2AL103J | R | 10k 1/10W Metal Film | AA |
| R459 | VRD-RA2BE680JY | R | 68 1/8W Carbon | AA |
| R501 | VRD-RA2BE272JY | R | 2.7k 1/8W Carbon | AA |
| R502 | VRD-RM2HD102JY | R | 1k 1/2W Carbon | AA |
| R503 | VRN-VV3AB2R7J | R | 2.7 1W Metal Film | AA |
| R504 | VRN-MD2AL181J | R | 180 1/10W Metal Film | AA |
| R505 | VRN-MD2AL102J | R | 1k 1/10W Metal Film | AA |
| R506 | VRS-VV3AB331J | R | 330 1W Metal Oxide | AA |
| R507 | VRN-VV3AB1R0J | R | 1 1W Metal Film | AA |
| R508 | VRD-RA2BE153JY | R | 15k 1/8W Carbon | AA |
| R509 | VRD-RA2BE153JY | R | 15k 1/8W Carbon | AA |
| R511 | VRN-MD2AL181J | R | 180 1/10W Metal Film | AA |
| R512 | VRD-RM2HD5R6JY | R | 5.6 1/2W Carbon | AA |
| R521 | VRD-RA2BE333JY | R | 33k 1/8W Carbon | AA |
| R529 | VRD-RA2BE223JY | R | 22k 1/8W Carbon | AA |
| R530 | VRS-CY1JF334JY | R | 330k 1/16W Metal Oxide | AA |
| R531 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R532 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R533 | VRD-RA2BE393JY | R | 39k 1/8W Carbon | AA |
| R601 | VRS-SV2HC102J | R | 1k 1/2W Metal Oxide | AA |
| R602 | VRD-RA2BE393JY | R | 39k 1/8W Carbon | AA |
| R603 | VRD-RA2BE273JY | R | 27k 1/8W Carbon | AA |
| R604 | VRD-RA2BE563JY | R | 56k 1/8W Carbon | AA |
| R605 | VRD-RM2HD124JY | R | 120k 1/2W Carbon | AA |
| R606 | VRN-VV3AB1R5J | R | 1.5 1W Metal Film | AA |
| R607 | VRD-RM2HD270JY | R | 27 1/2W Carbon | AA |
| R609 | VRD-RA2BE154JY | R | 150k 1/8W Carbon | AA |
| R610 | VRD-RA2BE102GY | R | 1k 1/8W Carbon | AB |
| R611 | VRN-MD2AL102J | R | 1k 1/10W Metal Film | AA |
| R612 | VRN-MD2AL123J | R | 12k 1/10W Metal Film | AA |
| R613 | VRN-MD2AL103J | R | 10k 1/10W Metal Film | AA |
| R614 | VRS-SV2HC150J | R | 15 1/2W Metal Oxide | AA |
| R615 | VRS-VV3DB682J | R | 6.8k 2W Metal Oxide | AA |
| R616 | VRN-VV3ABR47J | R | 0.47 1W Metal Film | AA |
| R618 | VRS-VV3DB391J | R | 390 2W Metal Oxide | AA |
| R619 | VRS-VV3LB103J | R | 10k 3W Metal Oxide | AB |
| R620 | VRS-VV3AB472J | R | 4.7k 1W Metal Oxide | AA |
| R622 | VRD-RA2BE102JY | R | 1k 1/8W Carbon | AA |
| R623 | VRD-RM2HD184JY | R | 180k 1/2W Carbon | AA |
| R624 | VRN-MD2AL472J | R | 4.7k 1/10W Metal Film | AA |
| R625 | VRN-VV3DB8R2J | R | 8.2 2W Metal Film | AB |
| R626 | VRD-RM2HD470JY | R | 47 1/2W Carbon | AA |
| R633 | VRD-RA2BE333JY | R | 33k 1/8W Carbon | AA |
| R634 | VRD-RA2BE103JY | R | 10k 1/8W Carbon | AA |
| R641 | VRN-SV2HCR47J | R | 0.47 1/2W Metal Film | AA |
| R651 | VRN-MD2AL223J | R | 22k 1/10W Metal Film | AA |
| R652 | VRN-MD2AL102J | R | 1k 1/10W Metal Film | AA |
| R653 | VRN-MD2AL822J | R | 8.2k 1/10W Metal Film | AA |
| R654 | VRN-MD2AL273J | R | 27k 1/10W Metal Film | AA |
| R655 | VRN-MD2AL391J | R | 390 1/10W Metal Film | AA |
| R656 | VRN-MD2AL100J | R | 10 1/10W Metal Film | AA |
| R658 | VRD-RA2BE101JY | R | 100 1/8W Carbon | AA |
| R663 | VRD-RA2BE101JY | R | 100 1/8W Carbon | AA |
| R701 | VRW-KQ3NC3R9K | R | 3.9 7W Cement | AE |
| R707 | VRS-VV3DB104J | R | 100k 2W Metal Oxide | AB |
| R708 | VRD-RA2BE681JY | R | 680 1/8W Carbon | AA |
| R709 | VRN-VV3DBR47J | R | 0.47 2W Metal Film | AB |
| R710 | VRN-VV3DBR56J | R | 0.56 2W Metal Film (14D1-S/G/W) | AA |
| R710 | VRN-VV3DBR47J | R | 0.47 2W Metal Film (14D2-S/G) | AB |
| R711 | VRD-RA2BE682JY | R | 6.8k 1/8W Carbon | AA |
| R712 | VRD-RA2BE152JY | R | 1.5k 1/8W Carbon | AA |
| R716 | VRD-RA2BE562JY | R | 5.6k 1/8W Carbon | AA |
| ⚠ R751 | VRC-UA2HG825KY | R | 8.2M 1/2W Solid | AA |
| ⚠ R752 | VRC-UA2HG825KY | R | 8.2M 1/2W Solid | AA |
| R753 | VRD-RM2HD124JY | R | 120k 1/2W Carbon | AA |
| R754 | VRD-RM2HD150JY | R | 15 1/2W Carbon | AA |
| R755 | VRD-RA2BE221JY | R | 220 1/8W Carbon | AA |
| R756 | VRD-RM2HD270JY | R | 27 1/2W Carbon | AA |
| R757 | VRN-MD2AL151J | R | 150 1/10W Metal Film | AA |
| R801 | VRN-MD2AL221J | R | 220 1/10W Metal Film | AA |

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|
| R802 | VRN-MD2AL221J | R | 220 1/10W Metal Film | AA |
| R803 | VRN-MD2AL221J | R | 220 1/10W Metal Film | AA |
| R804 | VRN-MD2AL221J | R | 220 1/10W Metal Film | AA |
| R805 | VRN-MD2AL822J | R | 8.2k 1/10W Metal Film | AA |
| R806 | VRN-MD2AL123J | R | 12k 1/10W Metal Film | AA |
| R807 | VRN-MD2AL103J | R | 10k 1/10W Metal Film | AA |
| R808 | VRN-MD2AL221J | R | 220 1/10W Metal Film | AA |
| R809 | VRD-RA2BE224JY | R | 220k 1/8W Carbon | AA |
| R812 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R813 | VRN-MD2AL221J | R | 220 1/10W Metal Film | AA |
| R1001 | VRN-MD2AL221J | R | 220 1/10W Metal Film | AA |
| R1002 | VRN-MD2AL331J | R | 330 1/10W Metal Film | AA |
| R1003 | VRN-MD2AL471J | R | 470 1/10W Metal Film | AA |
| R1004 | VRN-MD2AL821J | R | 820 1/10W Metal Film | AA |
| R1005 | VRN-MD2AL181J | R | 180 1/10W Metal Film | AA |
| R1011 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R1012 | VRD-RA2BE271JY | R | 270 1/8W Carbon | AA |
| R1013 | VRD-RA2BE101JY | R | 100 1/8W Carbon | AA |
| R1014 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R1015 | VRN-MD2AL332J | R | 3.3k 1/10W Metal Film | AA |
| R1016 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R1017 | VRN-MD2AL332J | R | 3.3k 1/10W Metal Film | AA |
| R1019 | VRN-MD2AL392J | R | 3.9k 1/10W Metal Film | AA |
| R1020 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R1021 | VRN-MD2AL153J | R | 15k 1/10W Metal Film | AA |
| R1022 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R1023 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R1024 | VRN-MD2AL122J | R | 1.2k 1/10W Metal Film | AA |
| R1025 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R1026 | VRN-MD2AL224J | R | 220k 1/10W Metal Film | AA |
| R1028 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R1030 | VRN-MD2AL102J | R | 1k 1/10W Metal Film | AA |
| R1031 | VRD-RA2BE562JY | R | 5.6k 1/8W Carbon | AA |
| R1032 | VRN-MD2AL332J | R | 3.3k 1/10W Metal Film | AA |
| R1034 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R1035 | VRN-MD2AL332J | R | 3.3k 1/10W Metal Film | AA |
| R1036 | VRN-MD2AL332J | R | 3.3k 1/10W Metal Film | AA |
| R1037 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R1038 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R1039 | VRN-MD2AL223J | R | 22k 1/10W Metal Film | AA |
| R1040 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R1041 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R1042 | VRD-RA2BE101JY | R | 100 1/8W Carbon | AA |
| R1046 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R1048 | VRS-CY1JF102JY | R | 1k 1/16W Metal Oxide | AA |
| R1050 | VRN-MD2AL392J | R | 3.9k 1/10W Metal Film | AA |
| R1051 | VRN-MD2AL683J | R | 68k 1/10W Metal Film | AA |
| R1072 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |
| R1073 | VRN-MD2AL101J | R | 100 1/10W Metal Film | AA |

### SWITCHES

| | | | | |
|---|---|---|---|---|
| ⚠ S702 | QSW-P0591CEZZ | R | Switch | AQ |
| S1001 | QSW-K0003AJZZ+ | R | Switch, CH UP | AB |
| S1002 | QSW-K0003AJZZ+ | R | Switch, CH DOWN | AB |
| S1003 | QSW-K0003AJZZ+ | R | Switch, VOL UP | AB |
| S1004 | QSW-K0003AJZZ+ | R | Switch, VOL DOWN | AB |
| S1005 | QSW-K0003AJZZ+ | R | Switch, PICTURE/PRESET | AB |

### MISCELLANEOUS PARTS

| | | | | |
|---|---|---|---|---|
| ⚠ ACC701 | QACCB5003PEZZ | R | AC Cord (14D1-W) | AY |
| ⚠ ACC701 | QACCZ2008PEZZ | R | AC Cord (except 14D1-W) | AM |
| ⚠ F701 | QFS-C3229CEZZ | R | Fuse, T3.15A/250V | AD |
| FB601 | RBLN-0091GEZZY | R | Ferrite Bead | AB |
| ⚠ FH701 | QFSHD1013CEZZ+ | R | Fuse Holder | AC |
| ⚠ FH702 | QFSHD1014CEZZ+ | R | Fuse Holder | AC |
| J402 | QJAKE0210CE04 | R | Jack, Video | AC |
| J403 | QJAKE0210CE09 | R | Jack, Audio | AC |
| J409 | QJAKHA004WJZZ | R | Jack, AV-1 IN | AE |
| P301 | QPLGN0241CEZZ | R | Plug, 2pin(S) (14D1-S/G/W) | AA |
| P302 | QPLGN0461CEZZ | R | Plug, 4pin(S) (14D2-S/G) | AB |
| P303 | QPLGN0461CEZZ | R | Plug, 4pin(HP) (14D1-S/G/W) | AB |
| P303 | QPLGN0561CEZZ | R | Plug, 5pin(HP) (14D2-S/G) | AB |
| ⚠ P601 | QPLGN0660CEZZ | R | Plug, 6pin(F) | AC |
| P602 | LHLDW1104PEZZ | R | Holder(H) | AB |
| P603 | QPLGN0341CEZZ | R | Plug, TP651-3 | AA |
| P701 | QPLGN0260CEZZ | R | Plug, 2pin(M) | AC |
| ⚠ P702 | QPLGN0269GEZZ | R | Plug, 2pin(M) | AB |
| P1001 | LHLDW1105PEZZ | R | Holder(K) | AB |
| P1002 | QPLGN0561CEZZ | R | Plug, 5pin(BC) | AB |
| RDA302 | PRDAR0341PEFW | R | Heat Sink for IC302 (14D1-S/G/W) | AD |
| RDA302 | PRDAR0340PEFW | R | Heat Sink for IC302 (14D2-S/G) | AE |
| RDA501 | PRDAR0118GJFW | R | Heat Sink for IC501 | AD |
| RDA701 | PRDARA028WJFW | R | Heat Sink for IC701 | AE |
| RMC1001 | RRMCU0222CEZZ | R | Remote Receiver | AL |
| TP201 | QLUGP0102PEZZ | R | Lug, Test Point | AA |
| | LHLDP1066PE00 | R | Holder | AC |

## DUNTKB509WEA4(14D1-S/G)
## DUNTKB509WEA5(14D2-S/G)
## DUNTKB509WEA8(14D1-W)
## PWB-B:CRT UNIT

### TRANSISTORS

| | | | | |
|---|---|---|---|---|
| Q870 | RH-TX0110BMZZ+ | R | TX0110BM | AC |
| Q871 | RH-TX0110BMZZ+ | R | TX0110BM | AC |
| Q872 | RH-TX0110BMZZ+ | R | TX0110BM | AC |
| Q883 | RH-TX0124BMZZ+ | R | TX0124BM | AC |
| Q885 | RH-TX0124BMZZ+ | R | TX0124BM | AC |
| Q887 | RH-TX0124BMZZ+ | R | TX0124BM | AC |

### DIODES

| | | | | |
|---|---|---|---|---|
| D881 | VHD1SS244//-1Y | R | 1SS244 | AB |
| D882 | VHD1SS244//-1Y | R | 1SS244 | AB |
| D883 | VHD1SS244//-1Y | R | 1SS244 | AB |
| D884 | VHD1SS119//-1Y | R | 1SS119 | AA |
| D885 | VHD1SS119//-1Y | R | 1SS119 | AA |
| D886 | VHD1SS82///1AY | R | 1SS82 | AC |
| D887 | VHD1SS82///1AY | R | 1SS82 | AC |
| D888 | VHD1SS82///1AY | R | 1SS82 | AC |

### CAPACITORS

| | | | | |
|---|---|---|---|---|
| C871 | VCCCCY1HH471J | R | 470p 50V Ceramic | AA |
| C872 | VCCCCY1HH391J | R | 390p 50V Ceramic | AA |
| C873 | VCCCCY1HH471J | R | 470p 50V Ceramic | AA |
| C875 | VCKYPA2HB102K+ | R | 1000p 500V Ceramic | AA |
| C876 | RC-KZ0150CEZZ | R | 1000p 3.15kV Ceramic | AB |
| C878 | VCEA0A2EW106M+ | R | 10 250V Electrolytic | AD |
| C880 | VCCCCY1HH471J | R | 470p 50V Ceramic | AA |
| C881 | VCKYPA1HB471K+ | R | 470p 50V Ceramic | AA |
| C882 | VCKYPA1HB471K+ | R | 470p 50V Ceramic | AA |
| C886 | VCKYPA2HB102K+ | R | 1000p 500V Ceramic | AA |

### RESISTORS

| | | | | |
|---|---|---|---|---|
| R879 | VRN-MD2AL471J | R | 470 1/10W Metal Film | AA |
| R880 | VRN-MD2AL471J | R | 470 1/10W Metal Film | AA |
| R881 | VRN-MD2AL471J | R | 470 1/10W Metal Film | AA |
| R882 | VRS-VV3DB153J | R | 15k 2W Metal Oxide | AA |
| R883 | VRD-RM2HD272JY | R | 2.7k 1/2W Carbon | AA |
| R884 | VRS-VV3DB153J | R | 15k 2W Metal Oxide | AA |
| R885 | VRD-RM2HD272JY | R | 2.7k 1/2W Carbon | AA |
| R886 | VRS-VV3DB153J | R | 15k 2W Metal Oxide | AA |
| R887 | VRD-RM2HD272JY | R | 2.7k 1/2W Carbon | AA |
| R888 | VRN-MD2AL471J | R | 470 1/10W Metal Film | AA |
| R892 | VRN-MD2AL102J | R | 1k 1/10W Metal Film | AA |
| R893 | VRN-MD2AL102J | R | 1k 1/10W Metal Film | AA |
| R894 | VRN-MD2AL102J | R | 1k 1/10W Metal Film | AA |
| R898 | VRN-MD2AL471J | R | 470 1/10W Metal Film | AA |
| R899 | VRN-MD2AL471J | R | 470 1/10W Metal Film | AA |

### MISCELLANEOUS PARTS

| | | | | |
|---|---|---|---|---|
| ⚠ SC881 | QSOCV0017PEZZ | R | Socket | AF |
| P882 | LHLDW1105PEZZ | R | Holder(K) | AB |
| P884 | LHLDW1104PEZZ | R | Holder(H) | AB |

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|

## DUNTKB510WEA3
## PWB-C HEADPHONE UNIT

### RESISTORS

| | | | | |
|---|---|---|---|---|
| RJ60 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ61 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| RJ62 | VRN-MD2AL000J | R | 0 1/10W Metal Film | AA |
| R370 | VRN-MD2AL471J | R | 470 1/10W Metal Film | AA |
| R371 | VRN-MD2AL471J | R | 470 1/10W Metal Film | AA |

### MISCELLANEOUS PARTS

| | | | | |
|---|---|---|---|---|
| J351 | QJAKJ0101SEZZ | R | Headphone Jack | AE |
| P351 | QPLGN0461CEZZ | R | Plug, 4pin | AB |

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|

## MISCELLANEOUS PARTS

| | | | | |
|---|---|---|---|---|
| SP301 | VSP9050PB35WA | R | Speaker | AK |
| SP302 | VSP9050PB35WA | R | Speaker(14D-2S/G) | AK |
| | QCNW-2206PEZZ | R | Connecting Cord | AD |
| | QCNW-2379PEZZ | R | Connecting Cord | AE |
| | QCNW-2380PEZZ | R | Connecting Cord (14D2-S/G) | AG |
| | QCNW-2452PEZZ | R | Connecting Cord (14D2-S/G) | AE |
| | QPLGJ0113CEZZ | R | Plug (except 14D1-W) | AG |

## SUPPLIED ACCESSORIES

### ACCESSORIES

| | | | | |
|---|---|---|---|---|
| | RRMCG1342PESA | R | Infrared RC | AU |
| | TINS-A340WJZZ | R | Operation Manual (14D1-S/G) | AK |
| | TINS-A365WJZZ | R | Operation Manual (14D2-S/G) | AK |
| | TINS-A425WJZZ | R | Operation Manual (14D1-W) | AF |
| | QANTR0018PEZZ | R | Rod Antenna (except 14D1-W) | AQ |
| | TMAPCA013WJZZ | R | Map (14D2-S/G) | AC |
| | TMAPCA014WJZZ | R | Map (14D1-S/G) | AC |

### ACCESSORIE*(NOT REPLACEMENT ITEM)*

| | | | | |
|---|---|---|---|---|
| | TCAUA0002PEZZ | - | Caution Card | — |

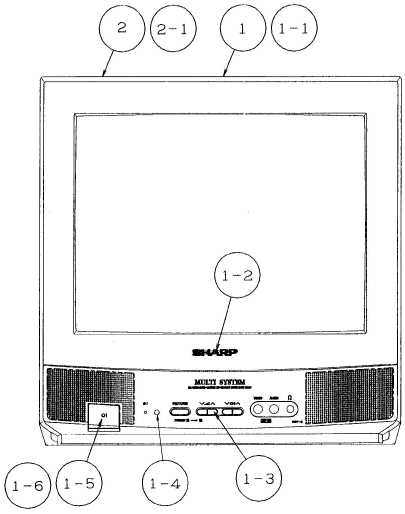
## PACKING PARTS
## *(NOT REPLACEMENT ITEM)*

| | | | | |
|---|---|---|---|---|
| | SPAKCA285WJZZ | - | Packing Case (14D1-S) | — |
| | SPAKCA316WJZZ | - | Packing Case (14D2-S) | — |
| | SPAKCA317WJZZ | - | Packing Case (14D2-G) | — |
| | SPAKCA363WJZZ | - | Packing Case (14D1-G) | — |
| | SPAKCA364WJZZ | - | Packing Case (14D1-W) | — |
| | SPAKP0056PEZZ | - | Wrapping Paper (14D1-S/G/W) | — |
| | SPAKXA138WJZZ | - | Packing Foam (14D1-S/G/W) | — |
| | SPAKXA163WJZZ | - | Packing Foam (14D2-S/G) | — |
| | SSAKA0031PEZZ | - | Polyethylene Bag | — |
| | SSAKH0009PEZZ | - | Polyethylene Bag (14D1-S/G/W) | — |
| | SSAKH0015PEZZ | - | Polyethylene Bag (14D2-S/G) | — |

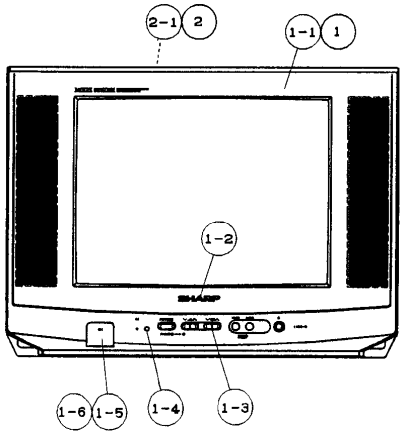
## CABINET PARTS

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|
| | | | **14D1-S/G/W** | |
| 1 | CCABAA145WEV0 | R | Top Cabinet Ass'y (14D1-S) | BC |
| 1 | CCABAA178WEV0 | R | Top Cabinet Ass'y (14D1-G) | BC |
| 1 | CCABAA179WEV0 | R | Top Cabinet Ass'y (14D1-W) | BC |
| 1-1 | *Not Available* | - | Top Cabinet | — |
| 1-2 | HBDGB0018PESB | R | SHARP Badge | AD |
| 1-3 | JBTN-A067WJSA | R | CTL Buton | AC |
| 1-4 | GCOVAA193WJSA | R | RC/LED Cover | AD |
| 1-5 | JBTN-A066WJSA | R | Power Button | AC |
| 1-6 | MSPRC0005PEFW | R | Power Button Spring | AB |
| 2 | CCABBA087WEV0 | R | Rear Cabinet Ass'y | AV |
| 2-1 | *Not Available* | - | Rear Cabinet | — |
| | | | **14D2-S/G** | |
| 1 | CCABAA149WEV0 | R | Top Cabinet Ass'y (14D2-S) | BB |
| 1 | CCABAA151WEV0 | R | Top Cabinet Ass'y (14D2-G) | BB |
| 1-1 | *Not Available* | - | Top Cabinet | — |
| 1-2 | HBDGB0019PESB | R | SHARP Badge | AD |
| 1-3 | JBTN-A028WJSA | R | CTL Buton (14D2-S) | AF |
| 1-3 | JBTN-A028WJSB | R | CTL Buton (14D2-G) | AF |
| 1-4 | GCOVAA106WJSA | R | LED/RC Cover | AC |
| 1-5 | JBTN-A069WJSA | R | Power Button (14D2-S) | AD |
| 1-5 | JBTN-A069WJSB | R | Power Button (14D2-G) | AD |
| 1-6 | MSPRC0068CEFW | R | Power Button Spring | AA |
| 2 | CCABBA096WEV0 | R | Rear Cabinet Ass'y | AX |
| 2-1 | *Not Available* | - | Rear Cabinet | — |

## CABINET PARTS LOCATION

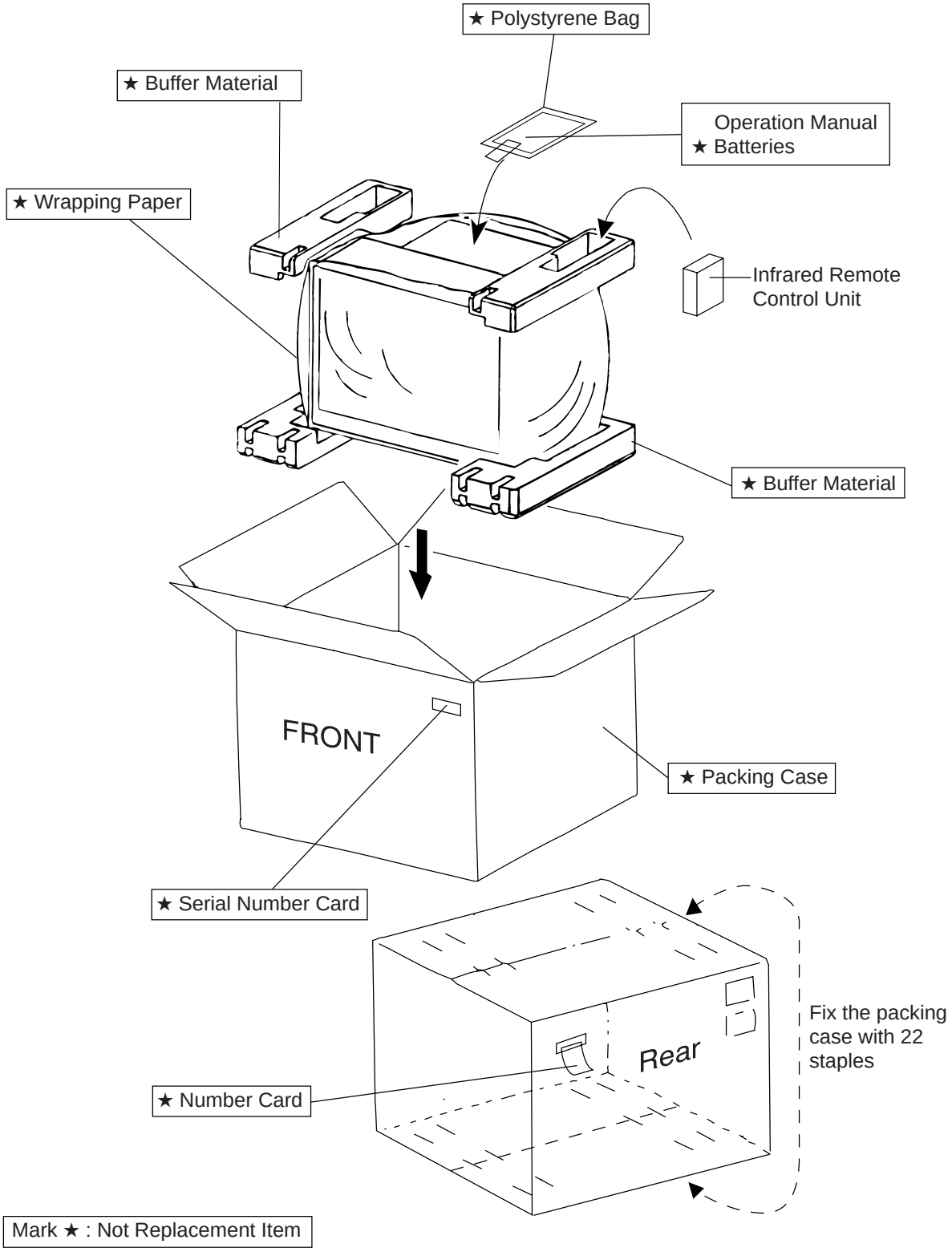



**14D1-S/G/W**




**14D2-S/G**

# PACKING OF THE SET




Mark ★ : Not Replacement Item

SHARP

**COPYRIGHT © 2002 BY SHARP CORPORATION**

ALL RIGHTS RESERVED.

No part of this publication may be reproduced,
stored in a retrieval system, or transmitted in
any form or by any means, electronic, mechanical,
photocopying, recording, or otherwise, without
prior written permission of the publisher.

TQ1431-S
Nov. 2002 Printed in Japan
In Japan gedruckt

| Design and Production Information | |
|---|---|
| Design | : SEM |
| Production | : SREC |

MY. DS

SHARP CORPORATION
AV Systems Group
Quality & Reliability Control Center
Yaita, Tochigi 329-2193, Japan